Faith&Thought

A Christian Forum exploring Science, Ideas and Culture

October 2025 No. 79

The Environment and Eschatology: Not the end of the world?

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The Victoria Institute or *Philosophical Society of Great Britain*
established in 1865, Charity No. 285871

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Editorial

It has been my great honour and pleasure to have served as Administrator for Faith & Thought since 2011, and as Editor since 2016. My role has been to help plan and organise our symposia / lectures, inviting speakers, as well as collating material for the journal and liaising with the printers etc. As we look to the future, it is good to pause and consider what direction we should take. After serving the Institute for 15 years, I now feel the time has come to step down, partly to enable me to better serve my local church context. In all of this I am very grateful for the help and support of fellow council members and the wider membership, but they are all busy people who do not feel able to take on more responsibilities at this time. This raises questions for the future of Faith & Thought in general. In truth our membership numbers are slowly declining, we are not attracting many new subscribers and there are other Christian Charities with overlapping objectives (not least our friends in Christians in Science). Has the time come when we should consider winding up the activities of Faith & Thought after 160 years, or are there new people keen to pick up the baton and move us forward?

Please could we invite you all to take some time to reflect and pray regarding these matters and if you, or someone you know, would be interested in stepping up to take on some of these duties, please do

get in touch. Alternatively, if you have views on how we might responsibly wind up the charity (including where we might transfer our resources to) then please share your views. I would stress that none of this is imminent, we will be holding a Symposium in 2026 on the important topic of 'Money' and we are exploring plans for a special edition of Faith & Thought in 2026. But beyond that we need to be realistic and consider the viability and fitness of an organisation birthed in the Victorian era for the world of today.

I look forward to hearing from you.

Alan Kerry (Administrator and Journal Editor)

'Is the future decided by Eschatology or Ecology?'

Can religion help or hinder efforts to save the planet - and should it?[1]

Celia Deane-Drummond, Director, Laudato Si' Research Institute & Senior Research Fellow, Campion Hall, University of Oxford.

Eschatology is about the future, and how to think about that in theological terms. Traditional theology associates eschatology, especially apocalypse, with the end of the world and the second coming of Christ, the *Parousia*. I'm bracketing out for this lecture internal debates within some branches of more fundamentalist theology that proposes that Christians will enter a messianic age for a thousand years. These are known as premillennial and postmillennial variations based on different interpretations of Christ's Parousia before or after the 1000-year reign.

Rather, the questions that I am intending to address are:

1. In what ways do secular and often scientific-based accounts of the future provide a *secularised eschatology* that then competes for public attention with Christian eschatology? The sciences involved in creating such apocalyptic narratives include the ecological sciences, climate science, earth system science (Anthropocene/Gaia), or a combination of these sciences. Although trust in science is not as strong as it was in the last century, these secularised apocalyptic narratives are still influential in the public domain.
2. What does biblical apocalyptic mean and how can it be interpreted in the light of (1)?
3. How have theologians responded to (1)? In the light of a gloomy end, should theology focus on a realised vertical form

[1] I would like to thank Alan Kerry and the organising committee of *Faith and Thought* for the kind invitation to deliver this first online lecture on March 13th 2025 in the series on *Environmentalism and Eschatology: Not the End of the World?*

of eschatology, rather than a future orientated horizontal version, as in the tradition?

4. What does Christian hope mean for today and does it hinder or does it help efforts to save the planet?

Secular Eco-Eschatologies: The End of the World (as we know it)

Even though there are different definitions of biodiversity, there is scientific consensus that biodiversity loss is an even more serious planetary threat than climate change. The IPCC *Code Red for humanity* released in the summer of 2021 shows collectively that humanity has even less time to make changes that will stabilize planetary conditions[2]. The future looks very, very bleak. Scientists stress that time is running out to make effective changes that are needed for survival, not just for human beings, but for all life systems on earth.[3]

Historically climate change has been one of the main drivers behind five mass extinction events over the last 541 million years[4]. In one such event 90% of all organisms were killed and life on earth almost came to an end.[5] Anthropogenic climate change could lead to an equally catastrophic loss. Increases in storms, floods, droughts, loss of homes and livelihoods, along with irreversible loss in species should act as a

[2] António Guterres, 'Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment', United Nations, 09 August, 2021, https://www.un.org/sg/en/content/sg/statement/2021-08-09/secretary-generals-statement-the-ipcc-working-group-1-report-the-physical-science-basis-of-the-sixth-assessment

[3] E.O. Wilson, *Half Earth: Our Planet's Fight for Life* (New York: Liveright, 2017)

[4] P.J. Mayhew, G.B. Jenkins and T.G. Benton. 'A long-term association between global temperature and biodiversity, origination and extinction in the fossil record,' *Proceedings of the Royal Society* 275 (2008), 47–53

[5] M.J. Benton. *When Life Nearly Died. The Greatest Mass Extinction of All Times*, revised edition (London: Thames & Hudson, 2015), 203; S. Sahney and M.J. Benton. 'Recovery from the most profound mass extinction of all time,' *Proceedings of the Royal Society B* 275 (2008), 759–765.

wake-up call for a humanity that has become, as Pope Francis puts it in *Laudato Si'*, indifferent to suffering[6]. Humanity is driving species to extinction at around 100 to 1000 times the background rate independent of human activity. This catastrophic loss is the *sixth great mass extinction event*, recognised by scientists over a decade ago. [7] The cause, for the first time, is human activity.

Humanity, especially on the margins, but increasingly everyone, is suffering the bitter consequences of an eroding biodiversity. Literally millions of people are losing their livelihoods, poverty is growing, food and water are becoming increasingly scarce, climate change is accelerating, and weather is far less predictable.[8] Extreme and out of the ordinary heat waves, storms and floods are commonplace. And it is the poorest of the poor who are bearing the brunt of this socio-ecological crisis.[9]

The massive growth in human activity, especially in the last few centuries, has drastically changed the ecological make up of planet earth and reversing such changes looks to be almost impossible.

As marine biologist Enric Sala leading a global international project at the National Geographic claims:

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[6] Pope Francis, *Laudato Si': On Care for Our Common Home* (London: Catholic Truth Society, 2015), §25, 92.

[7] Ceballos, G., P.R. Ehrlich, A.D. Barnosky et al. "Accelerated modern human–induced species losses: Entering the sixth mass extinction," *Science Advances* 1, no. 5 [2015], e1400253; A.D Barnosky, N. Matzke, S. Tomiya, et al. "Has the Earth's sixth mass extinction already arrived?" *Nature* 471 [2011], 51–57.

[8] United Nations Development Programme, 'The Next Frontier: Human Development and the Anthropocene. The 2020 Human Development Report', http://hdr.undp.org/en/2020-report (accessed August 30, 2021)

[9] As discussed repeatedly in Pope Francis, *Laudato Si'* (London: Catholic Truth Society, 2015) and Pope Francis, *Fratelli Tutti* (London: Catholic Truth Society, 2020).

> 'Today, 96% of the mass of mammals on our planet are us and our domesticated livestock. ....70% of all birds are now domesticated poultry, mostly chickens. ...90% of the large fish in the ocean have been extracted by fishing. Yet only 7% of the ocean is now designated or planned as protected area. ...And that means ecosystems across the world are under threat'.[10]

The threats are not just to ecological systems, but millions of human beings' lives are at stake related to what happens when the forests are cut down:

The forest itself generates its own healthy ecosystem. So, for Sala:

> 'the Congo Basin forest in West Africa, [is] one of the richest and most valuable ecosystems on the planet. One reason the Congo Basin ecosystem is so rich is that it gets such heavy rain. And here's something fascinating about that rain: the forest itself creates it'.[11]

The consequence of cutting down the forest according to Sala's calculations is that it will literally dry up the water supplies for millions of people:

> 'If we cut down that forest, that cycle will break. The rain will no longer fall in such abundance. That means no more water—or food—in Ethiopia. That's 125 million people now, probably double that by 2050. And the Ethiopian highlands provide the water for most of the Nile. Enter Sudan and Egypt, with an additional 138 million people, and growing'.[12]

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[10] Enric Sala, 'The Nature of Nature: Why We Need the Wild', Virtual lecture delivered as part of a hybrid event held at Pembroke College hosted by the *Laudato Si* Research Institute, Campion Hall, University of Oxford. See entitled *Realistic Hope: Theological Ethics and Conservation Practice* June 23rd, 2021, for recording of full event, see https://lsri.campion.ox.ac.uk/events/lsri-celebration, accessed September 20th 2021. See also Sala, *The Nature of Nature*, pp. 228-229.

[11] Enric Sala, 'The Nature of Nature'.

[12] Enric Sala, 'The Nature of Nature'.

Such loss of life and the impact on human survival and well-being has not, so far, received as much attention in the public domain when compared with discussions about climate change. Those discussions are equally apocalyptic in tone.

Scientifically climate models do not make secure predictions. However, as NASA climate scientist Philip Sakimoto suggests:

> 'We are, at base, conducting for the first time an experiment in seeing how our planet responds to having copious amounts of greenhouse gases placed in its atmosphere. Since we are living inside this experiment, we cannot afford to wait until the experiment has played itself out to find out what the consequences might be'.[13]

At the same time, 'The amount of carbon dioxide in our atmosphere is substantially higher now than it has been for at least the past 800,000 years.'[14]

There are also negative feedback loops of climate change on ecology:

> 'Tree growth, for example, is enhanced by excess carbon dioxide in the atmosphere. In principle, this should increase the number and extent of trees and hence increase the amount of carbon dioxide that is removed from the atmosphere. However, destructive insects such as bark beetles and ash borers are thriving in the warmer climate and damaging or destroying entire forests of trees. Thus, the ability of trees to

[13] Philip J. Sakimoto, 'Prologue: Understanding the Science of Climate Change' in Celia Deane-Drummond and Rebecca Artinian Kaiser, eds., *Theology and Ecology Across the Disciplines: On Care for Our Common Home* (T & T Clark, Bloomsbury, 2018), p. 9.
[14] Sakimoto, 'Prologue', p. 11.

> absorb carbon dioxide is actually being severely reduced or eliminated altogether.'[15]

Even more sinister is the possibility that a disrupted ocean ecology could in effect asphyxiate species like us that rely on oxygen:

> 'Vegetation on land and phytoplankton in the ocean are responding to warmer temperatures in ways that reduce their net uptake of carbon dioxide. Although their rates of daytime photosynthesis (which removes carbon dioxide from the atmosphere) are increasing, their rates of nighttime respiration (which returns carbon dioxide to the atmosphere) are increasing even faster. The result is a net decrease in the uptake of carbon dioxide and a net decrease in the production of oxygen. Not only does this exacerbate global warming, it may ultimately threaten the availability of oxygen for higher order species (like us) to breathe'.[16]

Scientifically driven apocalyptic accounts of the future are not, of course, completely new. For example, James Lovelock, who developed a theory of the earth known as the Gaia hypothesis in the '70s, in his book, *The Revenge of Gaia*, claimed that accelerating climate change would make the world 'so hot, so deadly, that only a handful of the teeming billions now alive will survive.'[17]

More generally, the Anthropocene, sometimes known as the geological age of humans, has been associated with the collapse of human futures as we know it.

The collective imprint of human activities is so pervasive within this Anthropocene world that the Earth System, most notably that

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[15] Sakimoto, 'Prologue', pp. 14-15

[16] Sakimoto, 'Prologue', p. 15.

[17] James Lovelock, *The Revenge of Gaia: Why the Earth is Fighting Back- and How We can Still Save Humanity* (London: Penguin, 2006), p. 147

associated with climate change, is destabilized and put at risk of complete planetary breakdown. Related assessments suggest that humanity is now close to passing several other planetary boundaries and tipping points.

Scientific accounts of irreversible and risky tipping points are particularly foreboding when illustrated by the *Doomsday Clock*, which was first started after the second world war in 1947. The Doomsday Clock factors in combined threats, such as that from nuclear weapons, the climate crisis, artificial intelligence, infectious diseases, and global conflicts. On 28th January 2025 it moved by one second to 89 seconds before midnight, the closest it has ever been to global catastrophe.[18] The Doomsday clock amounts to a secularised and apocalyptic eschatology. This is not so much about all life coming to an end, but the end of all human life, i.e. the geological age of the Anthropocene will have a boundary edge to it.

Not all secularised eco-eschatologies are apocalyptic. Climate change deniers refuse to accept the threats associated with climate change are caused by humans or have the kind of ending predicted by climate modelling. Ecomodernists accept the risk of climate change but have adopted a much more positive prediction about the future, embracing Anthropocene language. While they recognise ecological collapse and societal breakdown, their solution is technocratic, as this citation from the *eco-modernist manifesto*[19] shows:

> As scholars, scientists, campaigners, and citizens, we write with the conviction that knowledge and technology, applied with wisdom, *might allow for a good, or even great, Anthropocene*. A good Anthropocene demands that humans use their

[18] Bulletin of the Atomic Scientists, 'Doomsday Clock Announcement: It is Now 89 Seconds to Midnight', January 28th, 2025, https://thebulletin.org/doomsday-clock/.
[19] *An Ecomodernist Manifesto*, https://www.ecomodernism.org/

> growing social, economic, and technological powers to make life better for people, stabilize the climate, and protect the natural world.[20]

What about Biblical apocalyptic thinking?[21]

A popular understanding of biblical apocalypses is pointing to a future outside history. But their authors expected vindication *within the world*, not in some intangible existence beyond history. Clearly, if the lessons of apocalyptic are beyond this world, it will hinder any effort to save our planet. Apocalyptic literature includes wisdom. This might seem surprising. The sage is associated with confidence in the order, harmony and balance of God's creation; while the prophet seems to despair of that order.

According to the apocalyptic book of Enoch, the Fall amounts to a misuse of power and abuse of wisdom, manifesting on earth as abuse of women and corruption of creation.[22] This strand of apocalyptic literature associated knowledge of the workings of creation with a vision of God (compare Job where such knowledge was inaccessible). Apocalyptic sought to encourage *transformation in the present*, rather than a dualistic separation of heaven and earth. [23] Human knowledge has itself become corrupted, as it has disregarded the wisdom that is implicit in the natural world.

Perhaps one of the best-known examples of apocalypse in the New Testament is the book of Revelation. In this case wisdom *is* revelation. The secrets of the end time are revealed, but for a purpose, so that

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[20] *Ecomodernist Manifesto*, p. 6

[21] See also Celia Deane-Drummond, *Eco-theology* (Toronto: Novalis, 2008), pp. 164-178.

[22] Margaret Barker, *The Lost Prophet: The Book of Enoch and its Influence on Christianity*, (London: SPCK, 1988), p. 38.

[23] Margaret Barker, The Older Testament: The Survival of Themes From the Ancient Royal Cult in Sectarian Judaism and Early Christianity (London: SPCK, 1987), p. 29.

action can take place now. In Revelation 5:12 and 7:12 hymns are sung to the throne of wisdom, but only God and the Lamb are worthy to receive wisdom. Sophia is personified as Mother of the Messiah, the Son of Man and the Spirit. The sea monster and earth monster are not supernatural powers, but political powers that will ultimately be overthrown. Revelation 21-22 clarifies still further the importance of Christ as one who inaugurates 'a new heaven and a new earth'.

Should we take this to mean a literal disappearance of the present earth so that 'there is no longer any sea' (21:1)? This is extremely unlikely, given the symbolic language of the book of Revelation. The disappearance of the sea described in Revelation is symbolic for powerful and chaotically disruptive forces at work, yet the new comes out of the old, God removes sin and chaos. The tree of life hints at Genesis and instilling the idea of paradise regained, but also paradise *transformed*. The river is symbolic of the continuing presence of the grace of God, and the tree of life symbolic for the healing of the nations. Unlike Genesis, the tree is inaugural of blessing for all, rather than curse. Christ as Alpha and Omega implies that what he has begun in the creation of the world will be brought to completion. The encounter with God in Christ face to face also serves to remove all doubt about the future. His name on people's foreheads implies that there are none who are unknown or unloved; all have an accepted dignity and identity in the *new heaven and earth*.

The word used for 'new' here is *kainos*, often meaning 'new' in terms of quality, rather than *neos*, 'totally new'.[24] 'Renewed' is perhaps the more appropriate term.

By contrast Margaret Barker argues Revelation's new *does mean* a radical departure from the old after the end of time, for prophecies of

[24] Stephen Smalley, *The Revelation to John: Commentary on the Greek Text of the Apocalypse* (London: SPCK, 2005), pp. 524-5.

total annihilation are present in other passages in both the Hebrew Bible (e.g. Jer. 4:23–26; Ps. 102:25–27) and the New Testament (e.g. Mark 13:31; 2 Pet. 3:10). [25]

Clearly, the way such passages are interpreted will be crucial to an understanding of the continuation or otherwise of the created, material world. It is important to face the possibility that Revelation might imply destruction of the earth, rather than project our own concerns. If we expect total and irreversible destruction, that could hinder efforts to save our planet.

But Stephen Smalley suggests that the whole of Johannine theology *associates* heaven and earth, rather than trying to split them apart. The closest analogy here is the resurrection, so there are lines of continuity and discontinuity.[26] In addition there are some parallels with the idea of a new creation in Christ described in 2 Corinthians 5:17. There is no sense of *a completely new body*, rather, the newness is related to the spiritual life of the believer which includes the same renewed body. Other passages in the New Testament which speak of a 'burning up' of the earth, such as 2 Peter 3:3–13, also make most sense when compared with the story of the Genesis Flood account. The elements that are destroyed, such as the sea, are those principles that work against the will of God. God is portrayed as one who *cleanses evil, laying bare the earth*, with a connotation of *rediscovery, rather than replacement.* The sea did not disappear because it was evil. In Hebrew thought the sea represented *the deceptive nature of evildoers*. Its removal symbolised the unity of humankind and its security in a transformed creation.

[25] Margaret Barker, *The Revelation of Jesus Christ* (Edinburgh: Y & T Clark, 2000), pp. 364-7.
[26] Smalley, *Revelation,* p. 525.

Christian eschatology in a warming world.

Cumulative scientific sets of evidence of disasters could lead to apathy or increasing eco-anxiety, especially among young people whose future seems far less certain compared with those who were living even a generation ago. What might the theological alternatives be?

The first alternative might be to remove the temporal dimension altogether from Christian theology. Theologians such as Catherine Keller and Katherine Tanner, for example, argue for a realised eschatology that no longer includes a temporal dimension about future hope, it is simply missed out, or interpreted in a presentist way. Vertical -*kairos* time replaces horizontal-*chronos* time.[27]

Norman Wirzba, similarly, uses story-telling to introduce the idea that hope is 'a loving way of being that is animated by an affirmation of the goodness of this life, a practiced way of life rooted in the conviction that this life is worth cherishing.'[28] Indeed he argues that love is primary, so what is hoped for only becomes clear through a prior commitment to love in practical ways. Hope, in his thinking, is like an energy or 'a power that propels people off the couch and out the door'.[29] But his most insistent narrative is an agrarian one, so that the land needs to become a place of community and belonging, and it is from that place that hope flowers. So, 'the land's vitality and depth and

[27] Tim Howles, '*Deferring the End and Holding Open the Present*: Katechontic Political Theology at the Time of the Anthropocene', lecture delivered at Warwick University, 13th Feb 2025. See also, Tim Howles, 'Holding Open the Present', Genealogies of Modernity/Philosophy & Religion, January 19th, 2025, https://genealogiesofmodernity.org/journal/2022/1/19/holding-open-the-present; Tim Howles, Deferring the End, Genealogies of Modernity/Philosophy & Religion, January 21st, 2025, https://genealogiesofmodernity.org/journal/2022/1/21/deferring-the-end

[28] Norman Wirzba, *Love's Braided Dance: Hope in a Time of Crisis* (New Haven: Yale University Press, 2024), pp. 16-17.
[29] Wirzba, *Love's Braided Dance*, p. 19.

detail of its responsivity are why our world can be a place where hope grows'.[30] Hope, and therefore very much in the present, is born 'when people come together and commit to the nurture of each other and their shared places'.[31]

The second alternative might be to face up to the real possibility of an end and seek to weave it into a renewed eschatology. Perhaps a contemporary understanding of hell could include the abyss that lies beyond extinction – what philosophers have sometimes described as 'horrendous evils'.[32] Hans Urs von Balthasar has written graphically of Christ's entry into hell on Holy Saturday. He suggests that the purpose of theology that reflects on this moment is the 'realisation of all the godlessness of all the sins of the world, now experienced as agony and a sinking down into the "second death" and "second chaos", outside of the world ordained from the beginning by God'.[33] Christ's solidarity in this sense goes deeper than simply mortality; for it enters into that space that humanity fears most. Although von Balthasar did not extend his theology beyond the human community, a fear beyond that of simple mortality for non-human species is extinction. It is in that descent that Christ is most able to 'become the ascent of all from the same depths'.[34]

The third alternative is to include an eschatology of both now, and not yet; embrace the risks, but press for an alternative paradigm that weaves together scientific, social scientific and theological ideas.

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[30] Wirzba, *Love's Braided Dance*, p. 63.
[31] Wirzba, *Love's Braided Dance*, p. 150.
[32] Marilyn McCord Adams, *Horrendous Evils and the Goodness of God* (Ithaca: Cornell University Press, 2000).
[33] Hans Urs Von Balthasar, Mysterium Pascale, trans. With an introduction by Aidan Nicholas (Edinburgh: T & T Clark, 1990), pp. 51-2.
[34] Von Balthasar, *Mysterium Pascale*, p. 53,

Pope Francis develops this alternative. He rejects the idea that modernity and technocratic solutions are adequate responses to the climate and ecological crises. It is now ten years ago when he published *Laudato si'*. He was right to claim that 'there is a growing awareness that scientific and technological progress cannot be equated with the progress of humanity and history, a growing sense that the way to a better future lies elsewhere'[35]

Integral ecology as developed by Pope Francis is an approach to thinking about the future of the earth and its people through a different lens, one that is intended to inspire action in the present, but also include a future that still inspires hope.

Unlike ecomodernism, integral ecology in Pope Francis' understanding welcomes insights from other cultures, particularly indigenous cultures, and therefore includes as a positive good interconnectedness between humanity and other creatures in a web of life. Pope Francis' basic method is also in tune with the liberation theology paradigm that points to the future through see, judge, act, woven into the text, and Ignatian spirituality, finding God in all things.[36]

Perhaps unusually for a Catholic pontiff, Pope Francis also situates his discussion of integral ecology within an eschatology that is inclusive of other beings, rather than exclusive. His eschatology is about present realities and future hope, both for this generation, and the next. So on the one hand: 'all of us are linked by unseen bonds and together form a kind of universal family, a sublime communion which fills us

[35] Pope Francis, *Laudato Si'*, §113.

[36] Juan Carlos Scannone, 'Pope Francis and the Theology of the People', *Theological Studies*, 77.1 (2016), pp. 118–35; Matthew Ashley, 'Pope Francis as Interpreter of Ignatius's Spiritual Exercises', *Spiritus* 17.2 (2017), pp. 165–79.

with a sacred, affectionate and humble respect'.[37]And on the other hand his eco-eschatology points towards a future expectation of all creatures in communion with God: 'Even now we are journeying towards the sabbath of eternity, the new Jerusalem, towards our common home in heaven. Jesus says: "I make all things new" (*Rev* 21:5). Eternal life will be a shared experience of awe, in which each creature, resplendently transfigured, will take its rightful place and have something to give those poor men and women who will have been liberated once and for all'[38].

Integral ecology presents an *alternative societal imaginary to the Anthropocene*. It integrates the human into an ecological account while not losing sight of the importance of human dignity within a variety of cultures, with a stress on the importance of sustaining hope that a better world is possible, but without falling into ecomodernist hubris or a presumption of a literal hell on earth.

He has not, therefore, given up on the concept of Christian hope: 'Let us sing as we go. May our struggles and our concern for this planet never take away the joy of our hope' [39]

Eschatology and Christian meditation on hope.

As literary scholar, Terry Eagleton, in *Hope Without Optimism*[40] says, optimism is the belief that things will turn out right, the opposite of pessimism, which is the assumption that things will turn out badly. Hope, unlike optimism, can face both negative and positive outcomes in a way that optimism cannot. Rather than optimism, true hope breaks

[37] Pope Francis, *Laudato Si'*, §89.
[38] Pope Francis, *Laudato Si'*, §243.
[39] Pope Francis, *Laudato Si'*, §244.
[40] Terry Eagleton, *Hope Without Optimism* (London and New York: Yale University Press, 2015). Significantly, in my view, he dedicates this work to one of the finest philosophical theologians in recent history, Nicholas Lash.

the link with a modern doctrine of progress.[41] The Christian eschaton is not identical with the consummation of history, instead it intervenes apocalyptically into the human narrative, so being both within human history and yet discontinuous with it.

But does hope give us a real portrait of the future or not? Should hope be collapsed into presentist eschatology or is something thereby missing? For centuries there has been philosophical debate about whether hope understood in futuristic terms is simply illusory, dating back to ancient Greeks such as Plato, who thought hope could be deceptive and Euripides, who viewed it in even stronger terms as a curse on humanity.[42] Hope in this view would hinder rather than help efforts to save our planet. Hope requires fewer grounds than belief so that it is not invalidated by improbability, so it might be rational to hope for something but not necessarily believe it will come about.[43]

If hope is to be meaningful in our present socio-ecological context it needs, as philosopher Alan Mittleman has argued, to be a secular and civic virtue operational in the public domain. Where there is absolute certainty of either a negative or positive outcome, hope fades.

Mittleman edges towards a theological understanding of hope. Resonant with his Jewish heritage he can claim that 'to hope is to participate, in an initial way, in the unfolding of God's truth- in the anteroom, so to speak, of God's presence'.[44] It is as if by hoping we sense something of God's truth, whether we recognise it or not.

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[41] Eagleton, *Hope*, p. 27

[42] Eagleton, *Hop*e, p. 43

[43] Eagleton, *Hope*, pp. 48-9.

[44] Alan Mittleman, *Hope in a Democratic Age: Philosophy, Religion and Political Theory* (New York/Oxford: Oxford University Press, 2011). p. 4.

This touches on the Christian idea within eschatology of *katechon,* which means, literally *katechō*: to hold fast, or to hold back. This restraining force acts to prevent the end of the world coming too soon.

Bruno Latour claims in a book entitled *If We Lose the Earth We Lose Ourselves*:

> 'what is most needed for these supine moderns, faced by ecological collapse, is a return of the important question of the *katēchon*, the idea that the end of time is no longer behind us, as if it consisted of a move that had already been made, but ahead of us, in an unforeseen way, which finally brings about the animation that is needed to face the current crisis'.[45]

Latour argues that it is the Anthropocene narrative that has cracked open an alternative eschatological trajectory to modernity in a way that is positively helpful. I am rather less convinced that Anthropocene narratives can achieve positive outcomes in the way Latour suggests, both because of the existence of ecomodernism, which closely aligns the Anthropocene and modernity, but also because the Anthropocene could just as easily cement humanity in geological patterns that serve to eradicate human differences and absorb humanity into an impersonalised Nature.

Aquinas gives us a detailed account of what the virtue of hope looks like and how we might come to express that in our relationship with God. He does not, however, ground his discussion in what the virtue of hope means in terms of practical transformative action in the present, even while giving us a framework for the inner tapestry of hope in the human heart in relation to God. Jürgen Moltmann develops the Thomistic distinction between what could be termed secular hope and faith-based 'hope against hope', a type of hoping that can be present

[45] Bruno Latour, *If We Lose the Earth We Lose Our Souls* (London: Polity Press, 2024), p. 97.

even amid acute suffering and death. Like Aquinas, hope and Christian faith in Moltmann's thought are companions to each other, both interlacing and interdependent on the other. The difference, however, compared with Aquinas is that for Moltmann hope becomes not just an aspiration towards love of God in charity, but a strong *protest against* suffering in this world. [46]

Christian hope, to be true to its name, must therefore protest unjust suffering that is becoming part and parcel of the story of our broken, warming world. It is not just the threat of the earth's ultimate extinction that is at stake, but the wider unfolding of the process of that loss on the most vulnerable human communities. For Moltmann hope 'makes us ready to bear the "cross of the present"'[47]

This 'upside down' aspect of hope is stressed far more in Moltmann compared with Aquinas, but he also considers the risks of presumption and despair, though for him the greatest risk is not allowing the present to be challenged, i.e. *the practical radicality of hope*. [48]

The breaking in of Christian hope into the present, *adventus*, opposing *futurans*, the extension of our hopes into the future, is arguably his most original contribution to a theology of hope.[49] It also seems very distinct from the contemporary eschatological turn in theology, focusing on vertical rather than horizontal forms of eschatology.

The theological significance of hope is also teased out in an interesting way in the thought of Catholic theologian Karl Rahner. He takes special care to stress *God* as the object of hope in a way that aligns with Aquinas' position, such that God 'constitutes our absolute future', but

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[46] Jürgen Moltmann, *Theology of Hope*, translated by James W. Leitch (London: SCM Press, [1965] 1967), p. 21

[47] Moltmann, *Theology of Hope*, p. 31

[48] Moltmann, *Theology of Hope*, pp. 26-32.

[49] For discussion see Jürgen Moltmann, *The Future of Creation*, translated by Margaret Kohl, (London: SCM Press, 1979), pp. 29-31; 55-58;

without reducing hope to either faith or love 'on the way'[50]. Hope as theological virtue becomes possible because of what Rahner terms 'divine self-bestowal'.[51]

He is critical of scholastic tendencies to replace the vision of a quality of hope with its virtual disappearance on 'possession' or 'attainment'. Instead of humanity 'attaining' something by means of possession, the 'unfathomable mystery' instead 'must be sustained and endured' rather than attempting to be 'comprehended and so controlled and subordinated to the subject'. [52] He therefore stresses how different hope understood in theological terms is in comparison with the mere sentiment of hope, since theological hope for him:

> 'is a process of constantly eliminating the provisional in order to make room for the radical and pure uncontrollability of God. It is the continuous process of destroying that which appears, in order that the absolute and ultimate truth may be the intelligible as comprehended, and love may be that which is brought about by our love'.[53]

I suggest that this way of understanding hope makes sense within the context of an uncertain and uncontrollable future of the earth in the manner we are facing at present. It does not so much challenge that uncertainty, but embraces it in the light of an absolute uncertainty within our knowledge of God, who is not reduced to temporal uncertainty, but puts such uncertainties in divine perspective.

Hope in this mode therefore does not so much disappear but continues and endures and makes possible love and faith. In Rahner a Christian must 'impress the form of his hope upon the framework of

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[50] Karl Rahner, *Theological Investigations, Volume 10*, Part Three, 'On the Theology of Hope', translated by David Bourke (London: Darton, Longman and Todd, 1973), p. 245.
[51] Rahner, TI, 'On the Theology of Hope', p. 246
[52] Rahner, TI, 'On the Theology of Hope', p. 249
[53] Rahner, TI, 'On the Theology of Hope', p. 250. Italics in original.

the world'. [54] This hope in the concrete takes the form of reappraisal and critique, while sitting lightly to anything in this worldly life as if human life were totally dependent on it. In a fascinating way he attributes this transforming aspect of hope in the world as both depending on a greater hope in God, but also making it real.

So, 'In the power of this greater hope he also possesses the lesser hope, namely the courage to transform the 'framework of secular life'….and the converse too is no less true. In this lesser hope the greater one is made real'.[55] The two modes of hope therefore work together to transform society.

Final remarks - Hope as Socio-Ecological Virtue.

So, can a Christian eschatology motivate ecological concern and action, rather than apathy and complacency, and does that voice have any sway in the public sphere? My reply is emphatically *yes.*

Secular eschatologies either present a gloomy picture of the ecological future in apocalyptic narratives or deny the realities of climate change, or, as in ecomodernism presume the future will be solved entirely through new technologies. Biblical apocalypse was intended to challenge humanity's action in the present through its use of symbolism and narrative. The new earth in Revelation, for example, points to a renewed earth. The delay in coming of the Parousia, expressed in the biblical notion of *katechon*, challenges modern presumptions about human progress. Pope Francis' integral ecology addresses contemporary technocratic paradigms and seeks, instead, to weave together theology, science and insights from different cultures.

[54] Rahner, TI, 'On the Theology of Hope', p. 258.
[55] Rahner, TI, 'On the Theology of Hope', p. 259.

Moltmann and Rahner give insights into what could be termed the dynamism of Christian hope which is orientated towards God and is capable of a radical 'hoping against hope'.

Hope's situation at the boundary of impossibility yet possibility has resonance in the context of climate change, environmental damage and injustices that are all too much in evidence in our contemporary world. If Christian communities are to become resilient in the face of such threats, they will need to learn *how to nurture the virtue of hope*.

Hope, following Rahner, is that ability to lose control and acknowledge God in the face of the unknown and unseen in order that the grace of God may become evident. True Christian hope cannot be separated from the virtues of faith and charity, and, like hope, it is a divine gift rather than something that is acquired through learning.

Extending love and our object of hope to other creatures is not in conflict with our ability to love others, or love God, but enables us to continue to love the broken.

Pope Francis comments in *Fratelli Tutti* that 'it is truly noble to place our hope in the hidden power of the seeds of goodness we sow, and thus to initiate processes whose fruits will be reaped by others. Good politics combines love with hope and with confidence in the reserves of goodness present in human hearts'. (FT §196).

I would like to go even further and suggest that finding and developing a closer reconnection with the land and its creatures, even in recognising their suffering and pain and drawing on the virtue of hope to enable that attention and action for change also, in a profound way, promotes our own inner healing.

Teaching Eschatology in an Age of Science

John Weaver, Vice-President of the John Ray Initiative, former Principal of South Wales Baptist College.

Introduction:

Wes Jackson and Robert Jensen in: *An Inconvenient Apocalypse: Environmental Collapse, and the Fate of Humanity*,[1] argue that humanity even in wealthy nations such as the United States is approaching an environmental apocalypse in which in the near future peoples' capacity to sustain livelihoods will be diminished by environmental collapse.

Brian McLaren, in *Life after Doom*, notes that 'it's a feeling that catastrophe of some sort is inevitable, that we are on a moving pavement to the end of the world.'[2] He works on four scenarios:

- collapse/avoidance;
- collapse/rebirth;
- collapse/survival;
- collapse/extinction,[3]

concluding that whatever environmentalists do, our best efforts are insufficient. 'Those in power are hell-bent on destroying the planet, and most people don't care. 'Welcome to reality!' [4] And UN Secretary-General, Antonio Guterres, speaking at the COP27 climate change summit in Sharm El-Sheikh, Egypt said: "We are on a highway to climate hell with our foot still on the accelerator."[5]

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[1] Wes Jackson and Robert Jensen, *An Inconvenient Apocalypse: Environmental Collapse, and the Fate of Humanity*, Notre Dame, Indiana: Notre Dame University Press, 2022

[2] Brian McLaren, Life after Doom. *Wisdom and Courage for a World Falling Apart,* London: Hodder & Stoughton, 2024, p.2

[3] McLaren, *Life after Doom*, pp.32-34

[4] McLaren, *Life after Doom*, p.39

[5] https://www.un.org/sg/en/content/sg/speeches/2022-11-07/secretary-generals-remarks-high-level-opening-of-cop27

The current descriptions of climate change by the media often use apocalyptic language.

The wild fires destroying large parts of the area around Los Angeles in California in January 2025 have certainly been described in such a way. A witness said, 'you looked as if you were driving into hell!'

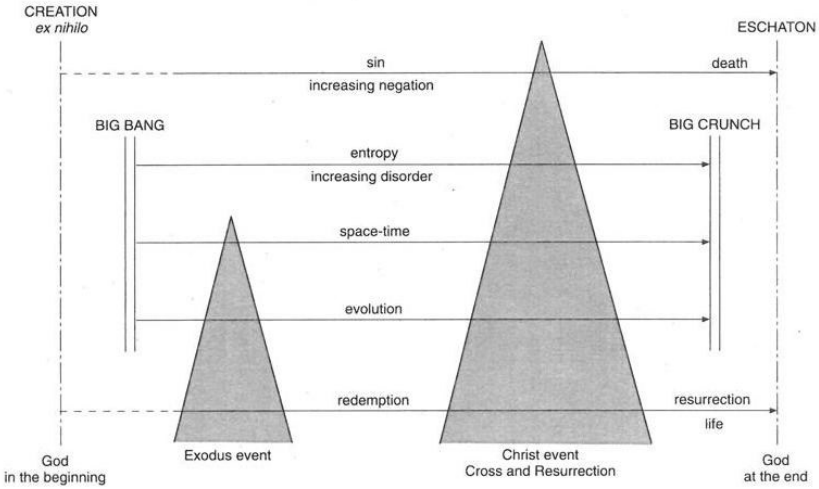
For the Pacific island atoll of Tuvalu apocalypse has already arrived, with large areas flooded and uninhabitable.

The latest Intergovernmental Panel on Climate Change (IPCC) synthesis report published in March 2023[6] states that human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 levels in 2020. They recognise that continued greenhouse gas emissions will lead to increasing global warming, reaching 1.5°C in the near future according to the best projections. The statistics and scientific assessment of global warming and the resultant changes in weather patterns and the intensity of weather events is frightening reading for many people. Climate change is a reality which is having disastrous effects on many living in the poorest countries of the world, and the resultant reduction in fertile land and water supplies is leading to civil unrest, wars, and large scale migration. When I presented the predictions of global climate change for the world in my science and faith lectures at Cardiff University in the early 2000s, one student in the Q & A session asked: 'Is slitting my wrists the only option I have?'

This one comment, agreed by the nods of other students, led me to change the thrust of my teaching with a focus on hope.

In teaching eschatology in my course on science and faith, I reflected on the current hypotheses for the origin/beginning and end/consummation of the universe.

[6] https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/accessed 04.04.23



From a scientific analysis we can speak about the origins of the universe and the end of the universe as we know it through concepts such as a 'big bang' beginning and a 'big crunch' end. The shaded areas indicate God's intervention. But such concepts from a faith perspective are within the eternal time frame.[7]

God is both the origin and ultimate consummation of creation. God is our ultimate hope.

The IPCC 2023 synthesis report reveals the probability that every increment of global warming will intensify multiple and concurrent hazards: floods, droughts, wildfires, crop failures, and migration of people from uninhabitable lands. Deep, rapid, and sustained reductions in greenhouse gas emissions would lead to a discernible slowdown in global warming within around two decades, and also to discernible changes in atmospheric composition.

The report states that climate change is a threat to human well-being and planetary health, and that there is a rapidly closing window of

[7] John Weaver, *Christianity and Science*. SCM Core Text, London: SCM, 2010, p.232

opportunity to secure a liveable and sustainable future for the human population.

This has led some commentators to speak of us entering a new epoch in the history of the Earth, the Anthropocene, in which human activity is the dominant influence on the environment, the climate and the ecological systems of the Earth.

The climate crisis has driven the world to the brink of multiple "disastrous" tipping points, according to a recent study,[8] some of which may already have been passed due to the current 1.1^0C rise in global surface temperature. Climate tipping points (CTPs) are a source of growing scientific, government policy, and public concern. Triggering CTPs leads to significant impacts, including substantial sea level rise from collapsing ice sheets, dieback of biodiverse biomes such as the Amazon rainforest or warm-water corals, and carbon release from thawing permafrost.

The Earth may have left a 'safe' climate state beyond 1^0C global warming; the whole of human civilisation having developed in temperatures below this level. Passing one tipping point is often likely to help trigger others, producing cascades.[9]

Greta Thunberg states that net zero by 2050 is too little too late. You can't bargain with physics nor negotiate with the laws of nature.[10]

Teaching Environmental Theology and Climate Change[11]

[8] https://www.science.org/doi/10.1126/science.abn7950, accessed 15.11.22
[9] See Johan Rockström, 'Tipping Points and Feedback Loops' in Greta Thunberg (editor), *The Climate Book*, Dublin: Penguin Random House, 2024, pp.32-40
[10] Thunberg, *The Climate Book*, pp.301-305
[11] I have covered some of the themes explored in this paper in 'Hopeful Disciples in a time of climate change' in Stephen Finamore & John Weaver (Editors), *Wisdom, Science and the Scriptures; Essays in Honour of Ernest Lucas*, Regent's Park and Bristol Baptist College, 2012; Eugene, Oregon: Wipf & Stock, 2014; and 'Wake up, sleeper, rise from the dead, and Christ will shine on you.' Climate change as a wake-up call, a Baptist perspective', in Paul S Fiddes (Editor) *One Earth, One Love. Orthodox and Baptist Theologians in Conversation about the Environment*, April, 2025

What does the Bible say? Does Christianity support our concern about climate change? Which passages in the Bible might we explore?

The text of Genesis 1-3 lays out the very first covenant act of God in creating the universe and the world we know. We learn of God's good creation, human relationship with the environment, and human rebellion. In Genesis 2 we have the call to care for creation (2:15) followed by God's design for human relationships: with God, with each other, and with creation. After the 'Fall' we see that each of these relationships is broken by human self-centredness and desire for power and control; wanting to play God.

Is climate change disaster foretold here in human rebellion to God's good creation? But God's purposes are proclaimed through the covenant with Noah (Genesis 8:22-9:17). This first covenant with human beings, is made by God with Noah (Genesis 6:11-9:17). God commanded Noah to conserve nature (6:19). After the Flood God establishes his covenant with all of creation (9:8-14). God's saving of creation is seen in God's heart, as he remembers Noah. The land is still to be fertile. But, the new covenant after the flood reminds us that we are always looking from the side of a broken creation, which will finally be redeemed in Christ.

From the Psalms we can discover how the people of the Old Covenant viewed creation. Through their worship demonstrated in Psalms 19, 24, 104, and148, we find that God is seen as the good Creator and as such is worthy of our praise. But more than this God's creation itself is a witness to God's love and purposes, and as such should be valued.

We should also, as the people of the Old Covenant realised, listen to the voices of nature. Kevin Durrant in his book *The Earth Will Teach You*[12], challenges the reader to listen to the wisdom that comes through the voices of the natural world; for him the whole of creation is sacramental. He reflects on Balaam's donkey who sees the danger, while Balaam's

[12] Kevin Durrant, *The Earth Will Teach You*, Milton Keynes: Lightning Source, 2014

pursuit of money has blinded him to God's truth. Durrant comments that now the animals are warning us as we blindly travel towards environmental destruction.

Durrant insightfully points out the value God places on the animals, the first place of Behemoth (Job 40:15) and Leviathan (Job 41:12) showing us God's pleasure and glory. But then when we consider the animals in Noah's Ark there are those that we would not have chosen to rescue because they are dangerous or annoying, yet to God they are all valuable.

Our worship of God is likewise skewed; Abram worshipped God at the sacred oak (Gen.12:6), but we soon replaced God's presence in nature with human constructed temples, spoken against by Stephen (Acts 7:48-50).

In addressing the lesson of the soil from which we are formed and to which we will return, Durrant helpfully suggests that our shoes are symbolic of our separation from the earth and our failure to respect the limits of nature, for example exceeding a 2^0C rise in average global surface temperature. He moves the argument forward as he discusses the cursed ground and our addiction to high consumption, which is preventing the ground in many poor countries from enjoying God's blessing. He rightly maintains that an exhausted land is best addressed through God's principles of Sabbath and Jubilee.

Sadly, Durrant reflects that we don't hear the voices of nature because of our disconnection with the rhythms of God. He encourages us to benefit from the God-given rhythms of the seasons and of day and night, which our modern industrialised world has blurred. He concludes that we need to hear the wisdom that God offers to us through the voices of nature, for example God speaking to us through the decline and extinction of species.

In his final thoughts he draws a parallel between Hezekiah's buying off of the Babylonian threat in exchange for 15 years of personal peace and prosperity (2 Kings 18:13-16, 20:4-19) with our desire for several extra

years of energy-rich living through the burning of fossil fuels and fracking of shale gas. Like Hezekiah we ignore the possible catastrophe.

He concludes that we have the testimony of two witnesses: scripture and nature supported by science. He stresses that we will be foolish to turn deaf ears to the voices of nature, which are for us the voice of God.

There is more to be discovered in the Old Testament understanding of God and creation through the Law and the Prophets. Jesus declared at the beginning of his ministry, as recorded in Matthew 5:17-18 that the words of the Law and the Prophets should always be listened to.

In Leviticus 25 we have the principle of Sabbath and Jubilee, where we find some important principles for our use of and care for creation. Sabbath days and Sabbath years and Jubilee (seven times seven years, the fiftieth year, the year of Jubilee - Leviticus 25:8-10) give three principles for farming and food production: sharing – with the poor; caring – for the earth; and restraint – of power and wealth. Jubilee was intended to protect the small householder and also served to establish an economic practice for redeeming the land and the people. But Peter Carruthers[13] notes that today there are imbalances in the world food system, there is unfair trading, and a growing industrialization of agriculture, which is destroying the environment. We might also suggest that we take a sabbath rest in the extraction of fossil fuels. Instead of keeping the Sabbath we have a Sabbath-less society.

In Leviticus 19 we find the principle of gleaning, which is important for the ways in which we use and share creation's gifts. The Jews of the Old Testament were not to harvest to the edges of their fields, but leave some of the grain, grapes or olives for the poor to collect (Leviticus 19:9-10). We might ask whether or not this is a pattern for business owners to follow today?

[13] 'Creation and the Gospels' in Sarah Tillett (editor) *Caring for Creation. Biblical and theological perspectives*, Oxford: Bible Reading Fellowship,2005

The Mosaic laws of gleaning, releasing, tithing and Jubilee present the biblical attitude toward wealth and possessions. These do not fit into any of the normal categories of our modern capitalist system and its approach to natural resources and the environment.

Timothy Keller[14] picks up the principle of gleaning and suggests that modern companies should not squeeze every penny of profit out of their businesses for themselves by charging the highest possible fees and prices to customers and paying the lowest possible wages to workers.

The prophet Isaiah (24:1-6) pointed to the degradation of creation and the destruction of human lives as a result of not keeping our covenant relationship with God. Isaiah prophesied that breaking our covenant with God leads to the abandonment of the vulnerable and the burning up of the environment.

Jesus certainly reaffirms God's ordered creation in his agricultural parables about seed and growth, planting and harvest, but there is more to be found.

In the prologue to the Gospel according to John (1:1-5), Jesus is presented as co-creator with God, and in John 3 God's love and redemption is for the cosmos, the whole of creation. In Matthew 22 the law is summed up by Jesus as relationships with God, people and creation, which is reminiscent of the creation covenant in Genesis 2.

The Apostle Paul states that the created order reveals the nature of God (Romans 1:20) and presents a vision of all creation created and redeemed in Christ (Colossians 1:15-20).

Paul also challenges us to see our Christian calling as the care of creation, where Romans 8:18-25 is a key passage: creation groans as it waits for human beings to become Christ-like. A creation in desperate need of redemption waits for human beings to recover their Christ-like humanity (Romans. 8:19-23). We look for the restoring of God's image in human

[14] Timothy Keller, *Generous Justice. How God's grace makes us just,* London: Hodder & Stoughton, 2012

beings and in the whole of creation, through restored relationships, justice and equality. This is at the heart of our participation in the mission of Christ.

What can we learn about the final results of our failure to care for creation? The Bible ends with a work of apocalyptic imagination (the Book of Revelation) in which civilisation collapses in an orgy of economic desperation, religious corruption, desperate political violence and ecological catastrophe.

Simon Woodman[15] observes that in the sequences of seals, trumpets and bowls (Revelation 16-18), John depicts scenes of environmental devastation, which culminate in the pouring out of the bowls triggering the death of every living thing in the sea, the poisoning of all waters, burning up the land from an intensified sun, and a time of darkness. He sees a powerful ecological parable here, noting that these visions of environmental destruction are interspersed with scenes of judgment on humanity, with the entire created order depicted as suffering the effects of humanity's rejection of God. John warns about the pursuit of wealth and power (worshipping the whore and the beast) leading to environmental destruction, much like today, says McLaren.[16] The writer of the Book of Revelation calls empire 'the Beast', and the religious structures that support it 'the Whore'.

But after the collapse, a new ecological civilisation becomes visible – the New Jerusalem of God which descends from heaven. The end of the Book of Revelation offers the hope of a new earth, similar to Isaiah's prophecy (Isaiah 65 & 66), but in both cases the prophecy is that God will renew (Greek *kainos*) the earth rather than replace it with a new (Greek *neos*) model.

There is then the hope of God's renewal of creation, the whole of creation restored by God.

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[15] Simon Woodman, *The Book of Revelation*. SCM Core Text, London: SCM, 2008
[16] McLaren, *Life after Doom*, pp.143-146

Where can hope be found?[17]

So how has my teaching developed to encompass hope?

The central theme of my lectures to various faith groups across the UK is 'Hopeful Disciples in an age of Climate Change.'

While I was speaking about climate change in Belfast in 2019, I visited the Titanic Experience and learned about three ships involved in that tragic event: the *Titanic* which sank after hitting an iceberg (sank on the night of 14-15 April 1912 with the loss of 1500 lives) – a catastrophe; the SS *Californian*, which was nearby, saw the icebergs, saw the distress rockets, didn't want to get involved, and sailed in the opposite direction believing that there was no real problem (the Titanic being unsinkable) - complacency; and the *Carpathia* which received the distress call and sailed at full steam, risking the destruction of its boilers and rescued 706 passengers from the icy sea – courage.

Today we are facing a climate emergency – a **catastrophe.** It is the poorest people of this world who are at greatest risk, while it is the lifestyle of the richest nations that has caused and is causing the emergency. For Christians it is a matter of justice, as it is the poorest and most vulnerable countries that will suffer most.

Katharine Hayhoe reflects that climate change is frequently presented as one of two apocalyptic visions. If climate change continues unchecked, there will be countless millions of refugees, massive droughts and floods, and entire land areas rendered uninhabitable. If we do fix it, many on the right of politics argue, the economy will be destroyed, and socialism will rule the world. In both visions, no one will

[17] My exploration of Catastrophe, Complacency and Courage was first discussed in '"Wake up, sleeper, rise from the dead, and Christ will shine on you." Climate change as a wake-up call, a Baptist perspective', in Paul S Fiddes (Editor) *One Earth, One Love. Orthodox and Baptist Theologians in Conversation about the Environment*, April, 2025

be able to eat meat or drive or travel or have children anymore.[18] Such fears often lead to hopelessness.

There is **complacency**. Ignoring the overwhelming scientific facts, some people still suggest that the climate is not changing and that human beings are not responsible. Some Christians think that it doesn't really matter because God will create a new world. Many people who although they recognise changes in the climate don't think that it is going to affect them because it is happening in countries far away.

The danger of hope is that it can lead to complacency, Greta Thunberg said: 'I don't want you to be hopeful. I want you to panic … and act as if the house is on fire. Because it is.'[19]

But she agrees that we need to act and for action to take place hope is essential. Brian McLaren concludes:

> even if we lose hope for a good outcome (of environmental collapse), we need not lose hope of being good people, as we are able, courageous, wise, kind, loving, 'in defiance of all that is bad around us.' [20]

We need people of **courage**. Katharine Hayhoe[21] concludes that the truth is that to address climate change there will have to be mitigation, adaptation, and suffering. The more mitigation and adaptation the less suffering. Being complacent and carrying on with business as usual is not an answer.

Science tells us what is happening: global temperature is rising, ice sheets are melting, sea levels are rising, CO_2 in the atmosphere is rising.

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[18] Katharine Hayhoe, *Saving Us. A Climate Scientist's case for Hope and Healing in a Divided World*, New York: Atria, Simon & Schuster, 2022, p.69
[19] Greta Thunberg in a speech at the World Economic Forum, Davos 25 Jan 2019
[20] McLaren, *Life after Doom,* p.99
[21] Faraday Institute Summer Course, 2019 available https://sms.cam.ac.uk/media/3028164

Most people now believe the scientific consensus that climate change is happening and is harmful to the world.

This is where science addresses our faith, but science can't tell us what to do – it tells us that if we choose to continue as we are, that these will be the results. We see the impacts of our choices being revealed by science. Rises in average global surface temperature will have scientifically predictable results, but science doesn't tell us what to do or how to act – this is a value judgement. This is where we have to make the connection between head and heart, between science and faith – it depends on what we believe.

The Prophets (old and new) using apocalyptic language, 'warn of catastrophe if we continue with the status quo. They are honest about the realities of sin, greed and grief. They call for radical, upside-down changes, not small adjustments to existing systems.[22] We learn from both Amos and Jeremiah that the false prophets promised hope without catastrophe, while God's prophets offer hope beyond catastrophe. We can speak of the hope of judgement; that there is accountability for our lack of care of the poor and of the environment. Our hope is based on God and God's justice and grace, which is not thwarted by human sinfulness.

Can there be a theology of hope? Can our sinful actions thwart the purposes of God? The promise of the first covenant, with Noah, is that while human sinfulness and self-centredness will continue so will God's gracious promise 'never again' to destroy the earth. (Genesis 8:21-22)

In Colossians 1:15-20 Christ is seen as the agent of creation, the sustainer of creation and, as redeemer, the one who holds creation together, and if Christ is the source of every element in the universe, then no part should be treated dismissively.

We bring together resurrection and redemption. While ultimate hope lies in God and God's consummation of creation, present hope within

[22] Hayhoe, *Saving Us*, p.83

God's world is found as Christians realise their discipleship as Kingdom people, finding their role as co-redeemers in Christ's mission in and for the world (God's redeeming love flowing through us in the power of the Spirit).

Christians have a contribution to make. God created and entrusted the earth, and will redeem the whole of creation (Rom.8:19-21). But this cannot be a cheap hope, human beings must act in hope - the Spirit gives us the possibility to be what we are to become - the children of God. We find the same message in Colossians 1:15-20, where Paul places the redemption of human beings in the context of the redemption of the whole creation, and creation is brought back into relationship with God through the cross. This takes place as human beings find their restored relationship with the Creator, through the cross; living as hopeful disciples. Jürgen Moltmann maintains that

> There can be no redemption for human beings without the redemption of the whole of perishable nature. So it is not enough to see Christ's resurrection merely as 'God's eschatological act in history'. We also have to understand it as the first act in the new creation of the world. Christ's resurrection is not just a historical event. It is a cosmic event too.[23]

Christians are called to a hopeful discipleship in the light of our ultimate hope in God's promises and purposes. We live as those who are created in the image of God and cooperate with God's transformative action in and for the world.

How we choose to live in the next ten years will shape the next century.

We need to become effective when it comes to climate action. When we hear or learn about what the real solutions look like, and how many of

[23] Jürgen Moltmann, 1995, *Jesus Christ for today's world*, London: SCM Press, p. 83, quoted in Helle Liht, Restoring relationships, pp.38-41.

them are already being implemented or will be in the near future, that can increase our sense of being effective.[24]

Collective efficacy (effective action) is even more important, the idea that together as a community we can make a difference. I saw this before lockdown in Loughborough, where churches had come together to successfully encourage and work with the local government in acting to reduce carbon emissions.

Where is our hope? We need God's renewing and empowering.

McLaren notes that every civilisation there has been has followed the pattern of: growth/exploitation; stability/conservation; release/collapse; and reorganisation.[25] He asks, how do we navigate turbulent times and land in a better place, and notes that after the fall of the Roman Empire monastic communities sprang up; and in our day we have seen the growth of many different aid charities, green movements and religious festivals.

But when our prime motive is love (cf. Matthew 22:37-40), different possibilities arise. We find courage and confidence, not in the likelihood of a good outcome, but in our commitment to love.

Conclusion

At the heart of the Christian message is hope. But to the comment 'God is in control' Hayhoe responds with the biblical sense of accountability for injustice, that we reap what we sow. Complacency and misplaced optimism are forms of false hope. False hope is a defence mechanism when we feel helpless in the face of a seemingly impossible problem. True hope must recognise the risk and understand what is at stake. She

[24] See the positive stance that Bill Gates takes in, *How to avoid a Climate Disaster. The Solutions we have and the Breakthroughs we need*, London: Penguim Books, 2022, where he notes the variety of technical fixes that are or may become available in the coming years. However many of these may be costly and produce more global emissions.
[25] McLaren, *Life after Doom,* p.201

states that rational hope accepts that success is not inevitable or even entirely probable.[26]

The practice of hope is searching for and sharing stories of people who are making a difference. For example my friend Pete Turner and his Christian friends in Sully, Vale of Glamorgan, who have developed an area of land (20 acres) where they are encouraging different habitats and are planting several thousand native trees, which they will use to teach and encourage young people to appreciate the value of the natural environment. The project aims to reduce atmospheric carbon and create habitat whilst providing space for youth work.

Greta Thunberg's hope lies in the morality of human beings, who once they have been made aware will act.[27] Together we can save ourselves.

Yet Christian love may or may not provide a path to a happy ending to our predicament, but it can provide a way forward as we live one day at a time into an unknown future, but in the certain experience of the God who accompanies us. [28]

In Christ we live as hopeful disciples, restored to our full humanity as God's stewards of creation, embodying the image of God, who has declared creation good and calls on human beings to exercise a godly care of the whole of creation.

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[26] Hayhoe, *Saving Us*, p.243
[27] Thunberg, *The Climate Book*, p.421
[28] See my exploration: 'Hopeful disciples in a time of climate change', in *Wisdom, Science and the Scriptures: Essays in Honour of Ernest Lucas*, ed. Finamore and Weaver..

'Eco-Christianity: Modelling New Creation for Discipleship and Mission'

Margot R. Hodson, Director of Theology and Education, The John Ray Initiative

In Arthur C. Clarke's short story 'The Nine Billion Names of God,' an order of Tibetan monks believe that the purpose of humanity is to discover all the names of God.[1] When the task is finished, the end of the world will come. Tired of working on the project for many centuries by hand, the monks decide to employ some western (and pretty sceptical) IT experts. Using a powerful computer, these engineers complete 15,000 years of name-finding in just 100 days. They begin to get nervous that once completed, the monks will blame them for the universe not ending, and so they decide to leave early. As the engineers ride down the mountainside, looking forward to returning to their homes and normality in the west, they calculate that the monks must be pasting the final printout of names into their holy book. They look up at the sky and notice that, "overhead, without any fuss, the stars were going out."

What we believe about the world to come can significantly impact on how we treat the world today. If we believe the world and the whole universe is going to be destroyed, we might decide it is not worth doing much to preserve it now. I once met a man who believed that when Jesus came back, he'd destroy this earth and give us a nice shiny new one. His parting comment was, 'so the quicker we trash the planet, the quicker Jesus will return!' We can be appalled at this person's attitude, but how do we use our theology to respond to the world and how does contemporary society shape and mould our theology? How can we discern our way through those complexities, and what might it mean for mission? This paper will first consider some underlying world views: how they influence on our eschatology and how that effects how we treat nature. It will look at some thinking that is having greater

[1] Clarke, A.C. (1953) The nine billion names of God, New York: Everyman's Library

impact in this century and the implications for our care for the environment. Finally it will consider why this is integral to Christian mission.

Two contrasting Christian motifs

Paul Santmire wrote his book 'The Travail of Nature' in 1991 and it has continued to influence eco-theology.[2] Santmire described two main lines of thought in Christian historical thinking. He picked out a spiritual motif, which rested on Greek, Platonic thought and put the emphasis on transcendence from this world, and secondly an ecological motif that emphasised God's presence in this world. Both have made valuable contributions to the development of the Christian faith, but have led to very different attitudes to the environment: the spiritual motif tends to see this world as something evil to be escaped; whereas the ecological motif sees this world as created by God and, though marred by sin, as fundamentally good. According to Santmire, the spiritual motif expresses a religious worldview that, if not outright hostile to the natural world, is at the very least unconcerned with its state of existence. He explains that this motif is "predicated on a vision of the human spirit rising above nature in order to ascend to a supramundane communion with God." Characteristic of the spiritual motif is the belief that God is a Being who is Transcendent from this world, but who chooses to intervene in its affairs at will. This view is sometimes described as Classical Theism. Furthermore, this motif expresses a fundamental theological bias towards only those beings considered rational, spiritual, or moral. This shapes a Christian world view where it is not considered important to care about nonhuman life and the material world because they are not a Christian concern. Santmire quotes a well-known phrase from Augustine's Soliloquies as a basic expression of this motif: "I desire to have knowledge of God and the soul. Of nothing else? No, of nothing else whatsoever."[3] Though it is possible to find both motifs in Augustine's writings, this more

[2] Santmire, H.P. (1991) The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology, Minneapolis: Fortress Press

[3] Augustine (386) Soliloquies, Book 2, Chapter 1.

Platonic view had a significant impact on the early church. Ultimately, nature is affirmed as a "good" only in its ability to embody spirit, which is the final measure and end of all theological inquiry for the spiritual motif.

In contrast to the spiritual motif, the ecological motif expresses "the human spirit's rootedness in the world of nature and on the desire of self-consciously embodied selves to celebrate God's presence in, with, and under the whole biophysical order".[4] Thus, unlike the spiritual motif's emphasis on God as a being apart from humanity and the natural world, the ecological motif stresses the immanence of God as the power of life itself, which is a presence in nature, humanity, and the rest of the cosmos. As Santmire states, the term "ecological" in the ecological motif is meant to express the systemic interrelationships between God, humanity, and the natural world. This could be understood in terms of Panentheism, but it also works with a more orthodox Christian concept of the complete immanence of God, combined with a belief in the distinction between God and his creation. So those are the two views that Santmire identifies and they both play out in the development of eschatology.

Understanding dualism

The early Church developed in a cultural context that was heavily underlain by a variety of dualisms. These impacted on Christian thinking and their influence can still be seen in the church today. There were three types of dualism that had particular influence.

First, Neoplatonism was developed by the Greek philosopher Plotinus and taught a body/soul dualism. This strongly influenced St Augustine and other Christian thinkers in the early church. The danger with this concept is that it can lead to the devaluing of one's physical being and, at worst, to seeing our bodies as in some way impure. This also leads to a devaluing of the created world and potentially of seeing that as impure or even evil.

[4] Santmire, op.cit.

This can lead to the second type of dualism, Gnosticism, which was framed in a spiritual/physical dualism. Gnostics taught that we should be dismissive of this imperfect material world, and we should instead seek to live in the spiritual realm. In considering both Neoplatonism and Gnosticism in the context of the contemporary church, one might see some strands of these ideas. They are most often found in church communities that are pietistic and more concerned about spiritual encounter than community engagement, social support and environmental care.

Thirdly, Manichaeism promoted the idea of a good/evil dualism. This led to the concept of a battle between good and evil. These ideas were taken up by various sects, though the transmission of ideas is complex. In the Middle Ages, the Cathari followed many of the same ideas. They were seen as heretical sects by the medieval church and it is not clear what influence their ideas may have had beyond their own communities. Other medieval movements also had an understanding of a good/evil dualism but without the negative view of creation. For example, St Francis had a clear understanding of the reality of evil and encountered spiritual battle in La Verna, but this was paired with a strong creation theology and understanding of God's love for the world he had created. It is interesting to explore where a spirituality which sees good and evil in a cosmic battle, can still be found in the church today. There are many positive examples where it might be one strand in a very broad biblical Christian understanding. One example of a movement that has used this dualistic concept of good and evil as a primary motivation, would be Christian nationalism. This movement promotes a faith that is pietistic in worship, but outward-looking in political engagement. It takes a negative view of those who express different views or are of different religious or ethnic groupings. Christian nationalists see themselves on the side of good and others on the side of evil.

Finally, it is important to ask if there are dualisms in Genesis. There is a distinction between God and creation. God is fully present in his

creation, but he is also separate from it. God is not a created being but an eternal one. Then we see a distinction between humans and the rest of creation. This is not a complete dualism because humans are fellow creatures, but they are distinct because they are made in God's image. The framing of these in the Genesis narrative is not so much dualisms as distinctions.

When we reflect on all the dualisms mentioned, it could be that there is a gradation in all of them and when each is a gentle distinction, it can be a helpful aid for Christian understanding and discipleship, but with all, including those in Genesis, when they are developed into strong dualisms, they can become negative in their impact. The interaction between these different dualisms, and a confusion between them led to the two strands of Christianity that Santmire identified.

Neoplatonism has made a significant contribution to the development of Christianity but it's non-material approach to faith has impacted several religions in their approach to society and the environment and has undergirded damaging approaches in both contexts. It had four key phases: The patristic period, especially with Augustine; the Medieval period, when Neoplatonist ideas influenced not only Christians, but also Jewish thinkers, such as Solomon ibn Gabirol, and other scholars who modified it in the light of their own monotheism. Neoplatonist ideas also influenced Islamic and Sufi thinkers such as al Farabi and Avicenna. Then there was considerable interaction between the three religions: in the 10th and 11th centuries, Jewish scholars in Southern Italy and Muslim scholars in Spain were translating Greek texts from Arabic and Hebrew into Latin. It was those texts that sowed the seeds of the Renaissance, which was the third phase of influence. In western Europe, Neoplatonism was revived in the Italian Renaissance by figures such as Giovanni Pico della Mirandola, Michelangelo and Sandro Botticelli. The Renaissance engagement with Greek philosophy was rich and complex. Scholars drew on the Greek understanding of design and mathematics, as well as philosophy and medicine. It was a time of intense intellectual energy and activity. In terms of impact on

the natural world, there was a tendency for Christians towards a view that God had created the earth in an incomplete state for us to complete and perfect. This can be seen worked out most completely in beautiful renaissance gardens, which are formal, mathematical and with a beautiful form. But inevitably, it was a view that led to a very strong sense of dominion over creation.

The fourth group were the Cambridge Platonists in the second half of the seventeenth century. It has to be remembered that many of these scholars had seen the horrors of the English Civil war and were seeking something higher and of purer value. They put a strong emphasis on reason as a means of knowing God and held the eternal existence of moral principles and of truth. They believed that the human mind is equipped with the principles of reason and morality. They were all dualists for whom mind is ontologically prior to matter, and for whom the truths of the mind are superior to sense-knowledge. Examples are Henry More (1614 – 1687), Ralph Cudworth (1617 – 1688) and John Smith (1618 – 1652). It is exemplified with a poem by Henry Vaughan (who was a student at Jesus College, Oxford, where many centuries later, I was Chaplain). Vaughan was caught up in the English Civil war and longed for a heavenly country where he could find peace.

My Soul, there is a country
Afar beyond the stars,
Where stands a winged sentry
All skillful in the wars;

There, above noise and danger
Sweet Peace sits, crowned with smiles,
And One born in a manger
Commands the beauteous files.

He is thy gracious friend
And (O my Soul awake!)
Did in pure love descend,
To die here for thy sake.

If thou canst get but thither,
There grows the flower of peace,
The rose that cannot wither,
Thy fortress, and thy ease.

Leave then thy foolish ranges,
For none can thee secure,
But One, who never changes,
Thy God, thy life, thy cure.

Scholars were taking a philosophic approach at Oxford and Cambridge but Platonic dualism was also visible in more ordinary local communities. Dualism at popular level, led to the belief that the material world was not of ultimate importance. That meant that it didn't matter if you damaged nature because people believed that it simply wasn't important to God or to human society. This view undergirded the terrible damage done to nature in the industrial revolution and the exploitation of nature and people. What Vaughan had seen as a means to transcend, and to some degree resolve, the horror of war, ironically led to an understanding of the world that gave license to abuse it further. In this context, faith is seen as an escape from material concerns. This would have been very understandable and attractive for a person who was condemned to live as a slave in the Americas, or to work 14 hours a day as a factory worker in England. Both may have taken solace in the words, "I am not of this world; I am only a passing through." This led to the view that the purpose of faith might be to escape the material world and gain the prize of a heavenly existence. The long-term impact of this theology, when combined with wider enlightenment thinking and capitalist approaches to economics, was a religion that became individualised, internalised and removed from material involvement.

Overall the impact of Neoplatonism on eschatology at popular level, was to promote the concept of a transcendent heaven; to place an emphasis on the destruction of the earth and cosmos; and to create a

hazy idea of a completely new heaven and earth that is spiritual rather than material.

Eschatology and mission

A belief in a transcendent heaven and a world heading for destruction inevitably focusses mission on personal conversion and individual personal faith alone. These views can lead to a negative or ambivalent attitude toward social and environmental concern and action. This became a popular view in the twentieth century, especially after the 'Great Reversal' when denominations and mission organisations, withdrew from wider social engagement because of a fear of the impact of liberalism and the 'social gospel'. It is still a view widely held in many Christian churches around the world but there are signs of change.

One scholar who has been highly significant is N.T. Wright. Wright has had a major influence on Christian theology, especially among evangelicals, who may have grown up in churches where the main emphasis was on personal faith, with little or no engagement with social care. Wright has been able to bring together a number of biblical views to create a fresh new approach, described as renewed eschatology. This links 'Creation', 'Salvation' and 'New Creation' and, in many ways it is a re-expression of the ecological motif of Santmire with a strong focus on Christ.

Wright takes eschatology forward in two ways: first, he has a Christocentric understanding of Creation. Instead of starting with creation in Genesis and then somehow fitting Jesus into it as the agent of creation, Wright starts with John chapter 1 with its focus on Jesus as the one through whom all things were made. He then takes Jesus and this vision of the Kingdom as the lens through which we might understand creation. He believes the results are striking, especially in relation to the parables. If creation comes through Jesus bringing in the Kingdom we ought to expect that it would be like a seed growing

secretly, or like the parable of the sower. If this is the case, it will help us to understand evolutionary creation.[5]

Secondly, Wright argues that we see the presence of God in the world, in such things as beauty, justice, and human relationships. These are imperfect but are 'broken signposts' pointing to God's glory, which one day will be restored. These hints of glory offer places for followers of Jesus to engage in the world and will become places for missional engagement.[6]

Then thirdly we need to remember Wright's teaching on covenant. His work on Paul came to the firm conclusion that the salvation won by Christ was a renewal of covenant and not a replacement of it. Jesus fulfilled and renewed God's covenants that were also all signposts pointing towards a restoration of relationships between God, people and the rest of Creation. Wright believes that this renewal of covenant will mean that there will be a renewal of creation. The New Covenant is therefore a renewal and a fulfilment of God's covenant relationship with humans and the rest of creation from Genesis onwards. Covenant and creation are both redeemed, renewed and remade.

When comparing Wright's theology to that developed from dualistic approaches, we see strengths in a strong Christological core with an emphasis on relationships that lead to reconciliation, rather than dualisms that lead to separation.

Creation renewed in Christ and the implications for mission

We can conclude that, as Jesus is "the one through whom all things were made", the renewal of Creation will also come through Christ. When we investigate the resurrection narratives, we can see that Christ's resurrection was the beginning of this renewal, whose

[5] https://www.youtube.com/watch?v=wZ2qrkE-t00&ab_channel=BioLogos (accessed 17/09/2025)

[6] Broken Signposts: A Review of N. T. Wright's History and Eschatology, The Other Journal https://theotherjournal.com/2020/05/broken-signposts-review-wright-history-eschatology/ (accessed 17/09/2025)

fulfilment is yet to come. Christ is the first fruits of the new creation[7] and the New Adam.[8] 1 Corinthians 15 looks at this concept in terms of physical and spiritual but it is clear that here we have a physical ecological renewal, Jesus has not made a spiritual escape but is renewing his creation starting with his own physical body. One day all of creation will be renewed and reconciled and, as Christians, we are already part of that Renewed Creation. There is a connection between being in Christ and new creation. That comes through very strongly in 2 Corinthians 5:17: "If anyone is in Christ there is new Creation". This verse has been translated in a variety of ways to seek to define the connection between "in Christ" and new creation (or new creature). The Greek text literally translates as: "In Christ New Creation". Whichever way we define it, we must conclude that there is an integral connection between being "in Christ" and there being "New Creation".

Wright's "Hints of Glory" are places where followers of Jesus can engage with the world. Something about our New Creation nature connects with these Hints of Glory and being in Christ means that New Creation is present in us and through us.[9] That means that we are demonstrating New Creation throughout our lives. We can't divide our lives into a spiritual part and a more earthy part. Christ reveals new creation in us and through us, whether we are at prayer and worship, or whether we are putting the bins out. We are demonstrating new creation when we help with the food bank and the debt centre; when we care for the sick and the elderly; and when we do a host of other things. New creation is an integral part of who we are. Further, being in Christ who brings new creation also means that we live our lives in ways that care for God's creation, that enables it to flourish, and shows what true reconciliation of God, people and nature could really be like. Living in this way, points towards that time when all creation shall be

[7] 1 Corinthians 15:20
[8] 1 Corinthians 15:45
[9] https://derekvreeland.com/2017/03/n-t-wright-revolutionary-cross-week-2/ (accessed 18/09/25)

reconciled and the new creation will have fully come. Therefore caring for creation is mission in its own right.

2 Corinthians 5:17-21 widens the horizon of our missional calling. As Christ's ambassadors, bringing new creation, we are called to bring the message of reconciliation, between people and God; among people; and between people and the rest of God's suffering creation. It is as we live out that message that we will discover our true discipleship.

Questions for discussion

1. What is the mission focus of your church and is there an underlying eschatology that shapes this focus?
2. How can we move the eschatology of our churches from believing in the destruction of creation to understanding its renewal?
3. Will this have an impact on a vision for creation care and social care?
4. Can things be the other way round? Can eschatological views emerge from praxis? (If we start to engage in social care and caring for creation, will our eschatology change?)

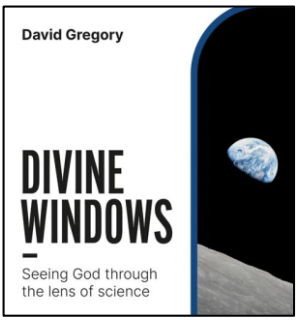
The Environment and Eschatology – Online Material

In addition to the three papers above, the 2025 Lecture Series also included an interactive session with Ruth Valerio entitled 'Practical Biblical action for climate change: What can be done by individuals and churches and how to nudge corporations and countries. This is available on YouTube here: https://tinyurl.com/mss4davh

Finally we held a hybrid in-person and online panel discussion, with a formal response from Dave Gregory which is well worth watching here: https://tinyurl.com/42vthben

All of the resources are on our webpage https://www.faithandthought.org/2025-lecture-series.html

David Gregory
Divine Windows
Abingdon UK: BRF (Bible Reading Fellowship) 2025. 140 pp. £12.99. ISBN 9781800393318



In his 2025 Whitley Lecture, Seidel Boanerges argues that to be fit for the 21st century, Christian apologetics needs to move beyond its traditional focus on the 'intellectual' to allow space for spiritual, artistic and action-oriented apologetics.[1]

Divine Windows is a short and beautifully presented book from the Bible Reading Fellowship that provides a good example of how to achieve this wider apologetic, and reminds us that the exercise is not entirely new. Indeed Gregory traces his approach from a tradition based on St Bonaventure's concept of 'vestiges' through Peter Berger's 'signals of transcendence' to invite us to consider how modern scientific imagery might serve as an 'icon' through which we can encounter something of the divine.

The putting into words of such an encounter is no easy task. Famously Wittgenstein concluded that 'whereof we cannot speak, thereof we must remain silent'[2] but Gregory is not content to accept this silence. Indeed he is wary of the tendency within modern science to 'send God to Coventry' where He is not to be spoken of (or to). Instead, Gregory invites us to put words to this experience.

But this is not an exercise in over-confident modernism or evangelical certainty; there is a subtlety to his argument which is worth heeding. He repeatedly suggests that saying 'we don't know' is something that

[1] Seidel Abel Boanerges, *Holistic Apologetics: Re-Imagining Apologetics for the 21st Century (Whitley Lecture)* (Regent's Park College, Oxford, 2025).
[2] Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, Routledge Classics (Routledge, 2001).

should be of equal importance in faith as in science. He helpfully distinguishes between a sacramental and technocratic imagination, and he is equally clear that there is a difference between panentheism and pantheism. He is not simply suggesting that we can find God in creation, but that aspects of creation, as revealed through modern scientific imagery, may be powerful ways of opening a window towards God's self-revelation. Indeed, for Gregory, the human imagination has an important role in encountering God in these images, which provide a lens, shaped by wonder, playfulness and a preference for order over chaos.

In this sense he is not concerned about whether an image is 'beautiful' or not, which might be a subjective and reductive measure to apply to an image. Rather such images may reveal something of the telos or purpose of the 'pilgimage of creation' and its relationship to its creator and for this reason they are worth considering and meditating on beyond the initial wow-factor response.

It isn't until chapter six, halfway through the book, that examples of such images are reproduced, accompanied by Gregory's own meditations on the elements of wonder, playfulness and order that each image provoke. He also gives some explanation of the technology used to produce these images. In this sense, the meditations combine an objective process of reading 'from' the images with a more subjective reading 'into' them of traditional Christian theological themes and ideas.

Seeing the world though a 'divine window' should necessarily involve a recognition of God's desire for justice within His creation, and Gregory interweaves eco-justice concerns throughout these meditations, moving us from artistic appreciation and spiritual encounter, towards an action-oriented apologetic. I thoroughly enjoyed this book and enthusiastically commend it to you.

Reviewed by Alan Kerry

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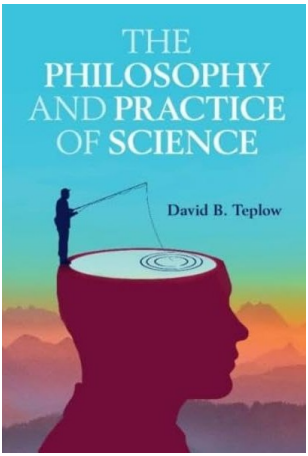
David B. Teplow
The Philosophy and Practice of Science
Cambridge UK: CUP 2023. 394 pp. hb. £47.51. ISBN 9781107044302



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 Genom 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 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 on 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,

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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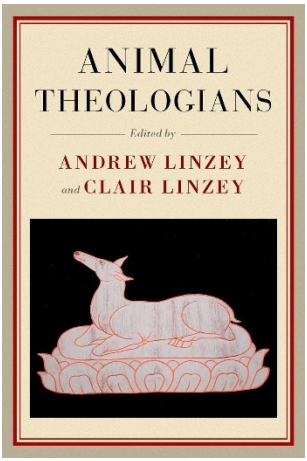
Andrew Linzey and Clair Linzey (eds.)
Animal Theologians
New York: Oxford University Press, 2023. 452 pp. pb. £23.91. ISBN 9780197655559

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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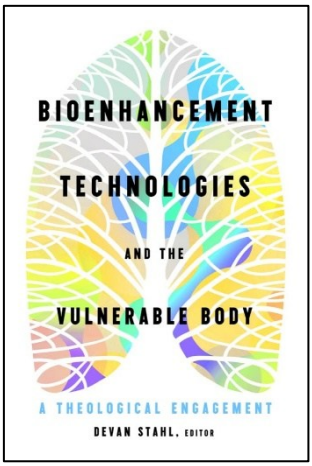
Devan Stahl (ed)
Bioenhancement Technologies and the Vulnerable body: A Theological Engagement
Waco, TX: Baylor University Press, 2023. 244p. pb. £46.95. ISBN 9781481318273

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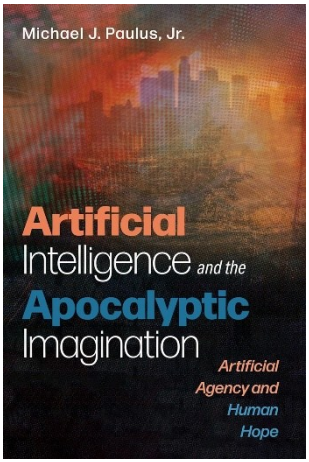
Michael J. Paulus Jr.
Artificial Intelligence and the Apocalyptic Imagination: Artificial Agency and Human Hope
Eugene OR: Cascade Books, 2023. 154 pp., pb. £19. ISBN 9781666736397

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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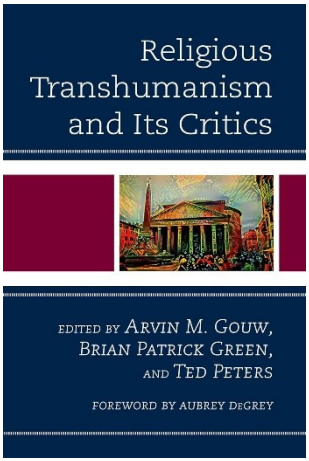
Arvin G. Gouw, Brian Patrick Green, and Ted Peters, eds.
Religious Transhumanism and Its Critics
Lanham, MD: Lexington Books, 2022. 408pp. hb £112.00. ISBN 9781498584135



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 neglect 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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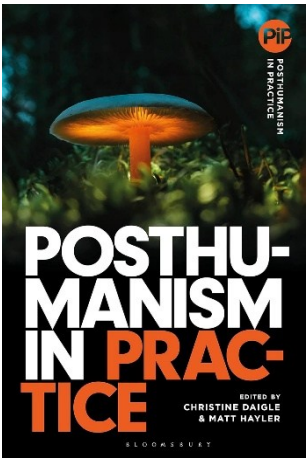
Christine Daigle & Matt Hayler
Posthumanism in Practice
Bloomsbury Academic, 2023. 264 pp. pb. £26.09. ISBN 9781350293809

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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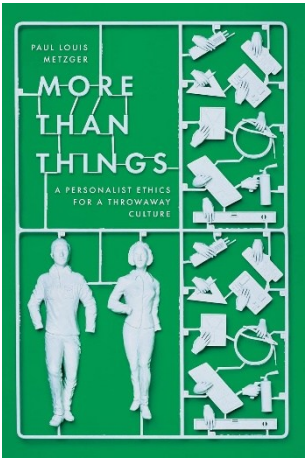
Paul Louis Metzger
More Than Things: A Personalist Ethics for a Throwaway Culture
Downers Grove IL: IVP, 2023. 452 pp. pb. £22.29. ISBN 9780830850914

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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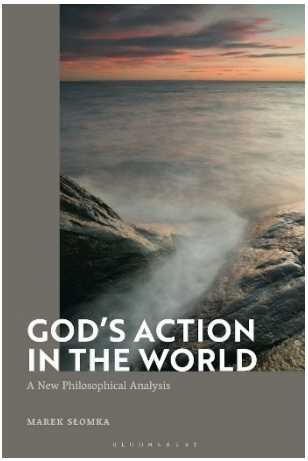
Marek Słomka
God's Action in the World: A New Philosophical Analysis
London/New York: Bloomsbury Academic, 2021. 227 pp. hb. £95.00.
ISBN 9781350180383

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', *Filo-Sofija* (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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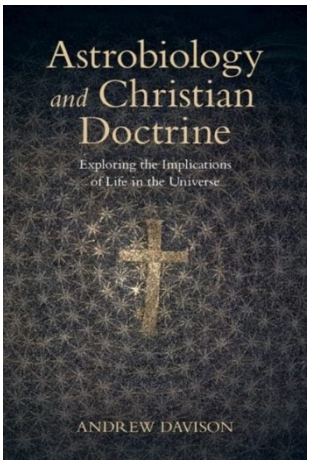
Andrew Davison
Astrobiology and Christian Doctrine: Exploring the Implications of Life in the Universe
Cambridge: Cambridge University Press, 2023. 350 pp. hb. £30.00. ISBN 9781009303156



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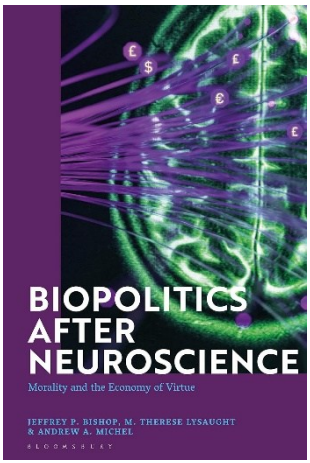
Jeffrey P. Bishop, M. Therese Lysaught and Andrew A. Michel
Biopolitics After Neuroscience – Morality and the Economy of Virtue
London: Bloomsbury Academic, 2022. 288 pp. pb. ISBN 9781350288485.



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' (p. 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' (p. 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 popularisers are cited, and mentioning just one of the more extreme popularisers 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 (pp 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 (p. 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' (p. 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" (p. 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 (p. 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' (p. 210). We must become more 'humble and unsure, lest we harm that which we think we have fully captured'.

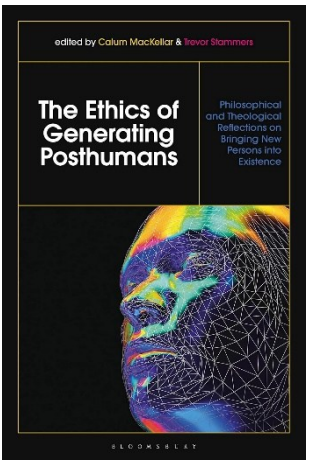
There are many cogent arguments in this well-argued book, but scientists may find it hard-going in places, as the somewhat discursive and repetitive style of the humanities, at least in Part I, can hinder clarity. Having said that, the historical arguments that dominate Part II of the book are well laid 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.

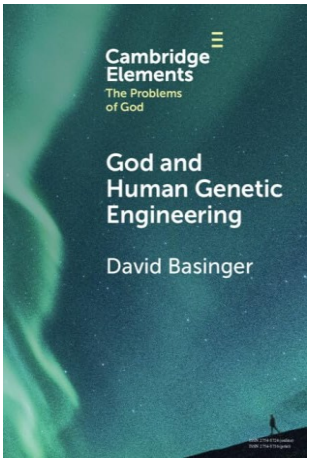
The notion of the posthuman person is explored from various philosophical perspectives, drawing on Taylor, Kant, Bavinck and Heidegger. In these chapters, various important themes emerge - the posthuman person as a sociotechnical entity (and therefore not value-neutral), the link between transhumanism 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.

Stephen Goundrey-Smith is a scientific theologian and Associate Tutor in Christian Ethics and Doctrine at Ripon College, Cuddesdon.

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 S&R) 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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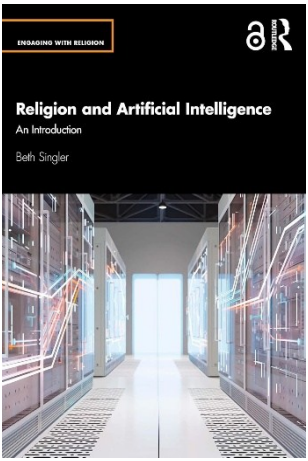
Beth Singler
Religion and Artificial Intelligence: An Introduction
London & New York: Routledge, 2025. hb 218 pp, £119.11, ISBN 9781032187631



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.

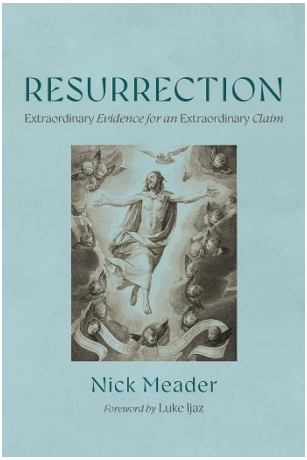
All this, of course, returns us to the philosophical and theological question: could a computer or robot ever possess a sufficiently human-like status to qualify it for baptism? Disappointingly, Singler never addresses such ontological questions in any depth. While this is perhaps understandable, given 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.

Jonathan W. Chappell holds postgraduate degrees in anthropology, sociology, philosophy, and theology

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 Rabbinic 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.

Rodney Holder is former Course Director of The Faraday Institute for Science and Religion and a Fellow Commoner of St Edmund's College, Cambridge.

Agenda for Annual General Meeting to be held 26th March 2026

Details at https://www.faithandthought.org/2026-lecture-series.html

1. Chairman - the Rev. Dr R. H. Allaway.
2. The Minutes of the previous AGM (available in F&T77 or online)
3. To approve the election or re-election of:
    a. The President (Professor David Wilkinson),
    b. Vice-Presidents (Prof. Malcolm A. Jeeves, Revd Dr John Weaver)
    c. Honorary Treasurer (Dr David Watkis),
    d. Council - Rev. Bob Allaway, Rev. John Buxton, Dr Alan Kerry, Mrs Joanne Mead, Rev. Dr David Instone-Brewer and Dr David E. Watkis and Dr Todd Kantchev (ex officio)
4. The annual accounts, which will be available on the website, will be presented for approval.
5. Plans for 2026-2027.

Faith & Thought Academic Grants

Are you engaged in or planning postgraduate study of some form into the area of Faith & Thought? Perhaps you're planning a sabbatical or enrolled on a course already. Maybe you work for an academic institution and would like to pursue your own study or research area? We are making available two grants per year of £1000 each to support such work. Maybe you know someone else who would benefit from this? At the 2018 AGM it was agreed that:

a) Faith & Thought (The Victoria Institute) invites applications for up to two academic grants per year of £1000 each.

b) Applicants should be undertaking post-graduate study of some form which addresses the interface between contemporary thought and the Christian Faith.

c) Applicants are required to submit a brief proposal of up to 1000 words outlining the proposed study regarding aims, questions, methodology and impact of the potential insights gained from this work. This should include details of how the grant might assist the applicant in undertaking this work.

d) Applications will be considered by Faith & Thought Council based on the following criteria:

a. the relevance of the proposed study to Faith & Thought's overall objectives
b. the clarity and coherence of the applicant's proposal
c. the impact the study will have on Faith & Thought's mission and the wider field of knowledge in this area

e) Before awarding the grant, successful applicants will need to have a named supervisor in place willing to give a reference for the applicant (though the supervisor need not necessarily be from an academic institution, for example those undertaking sabbatical studies may identify a senior minister, or other person willing to affirm the application).

f) Successful applicants should make available an article based on their research / studies to be published by Faith & Thought.

The Application Form is available on the website www.faithandthought.org We look forward to hearing from suitable applicants.

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Dr Alan Kerry, 15 Evans Orchard, Marston Moretaine, Bedfordshire, MK43 2AR

2026 Lectures

Register now for our 2025 Lecture series:

Thursday 12 March 7pm online:

- **David Instone-Brewer**: Money in the time of Jesus - A new Technology
- **Victoria Turner**: Money and Christian Activism

Thursday 19 March 7pm online –

- **Paul Morrison**: Beliefs embedded in economic theory
- **Andrew Grinnell**: Including the poor in discussions about poverty

Thursday 26 March 7pm online / in person – check the website for details

- **Responses and Panel Discussion, will also include F&T AGM 202**

Faith&Thought

Books reviewed in this issue:

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Banner Image – Created by A.I.

ISSN 0955-2790

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