Faith&Thought

A Christian Forum exploring Science, Ideas and Culture

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To the greater glory of God

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- Webinar Review
- Book Reviews

FAITH and THOUGHT

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Editorial

We have recently finished our 2025 series of lectures on 'The Environment and Eschatology: Not the End of the World?' which explored Chrisitan responses to anthropogenic environmental disruption. One possible response is lament, or even outright anger, at the wanton carelessness with which humans exploit the natural world. Such an emotional response finds deep resonances in scripture, where God himself laments the ruin brought about by those who were given the task of stewardship 'Many shepherds will ruin my vineyard, and trample down my field; they will turn my pleasant field into a desolate wasteland.' (Jeremiah 12:10). Perhaps part of the problem is that we have forgotten how to lament deeply alongside God, as we increasingly divert our attention from the real world to artificial cyberspace. But in this sterile landscape we still crave emotional connection, leading to attempts to get technology to mimic emotions. But, as our main paper points out, there is an irreconcilable difference between 'begotten' and 'made'. Only with a restored relationship with the one who gives us life can we truly hope for a restored creation.

This issue also carries an In Memoriam section remembering some of our members who lived remarkable lives of hope in action, to the greater glory of God.

Alan Kerry (Administrator and Journal Editor)

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Synthetic Emotions and the *imago Dei*

Peter Robinson
Gonville & Caius College, Cambridge

The robots are coming. Turn on the television and you will see series like Humans or Westworld where human-like robots turn on their creators. Read the newspaper and you will see headlines about robots taking our jobs or holding beauty contests for people. In one case an intelligent robot that remembers and learns was even reported to have escaped from its home laboratory on more than one occasion (Wajeeha, 2016). Serious scientists such as the late Stephen Hawking and the former astronomer royal and President of the Royal Society, Martin Rees are joined by industry leaders like Bill Gates and Elon Musk in talking about artificial intelligence developing so quickly that it will take over from humans (Hawking, 2014). Recent developments in the use of large language models for generative conversational systems such as ChatGPT have led to speculation that sentient machines are already here. Some even talk of this being the next step in evolution on Earth, and we humans will become as extinct as the dinosaurs, letting computers take over.

What is the proper Christian response to these questions? As ever, we must turn to the Bible for guidance.

In the beginning…

The Bible, of course, says nothing explicit about the philosophical, social and theological implications of automation, robots and artificial intelligence. However, it does give us a framework within which we can assess the value of human endeavours. The opening chapters of Genesis set out God's intention of what it means to be human. They can help us put all these new technologies into perspective. And the whole Bible explains God's greater purpose for humans in his creation.

Genesis is not written as a historical narrative or as a scientific textbook, so we shouldn't try to take the six days of creation too

literally. But it does tell us a lot about God – the word 'God' occurs 30 times in the first 31 verses. And it tells us about God's creation, particularly the pinnacle of creation, which is mankind.

Genesis 1:26 says:

> *Then God said, "Let us make mankind in our image, in our likeness, so that they may rule over the fish in the sea and the birds in the sky, over the livestock and all the wild animals, and over all the creatures that move along the ground."*

God created people in his own image, but what is that image? The best place to look is right there in the earlier verses of Chapter 1 of Genesis. They tell us three important things about God.

Firstly, they tell us that God was there in the beginning. In the beginning God… I am not a physicist but I understand that one of Stephen Hawking's last scientific papers, published after his death, describes how the mathematics of the big bang means that there actually was a beginning to time (Hawking, 2018). Time as we understand it started at that moment of creation. God was there in the beginning.

Secondly, God is creative. God created the heavens and the earth, he created light and darkness, he brought order to the chaos, he separated land and sea, he created plants, fish, birds and wild animals. Finally, he created mankind.

Thirdly, we see God as a ruler and a judge. Through the six days of the creation, God gives orders and those orders are obeyed. Six times we read, "And it was so." God rules. God also judges. Five times we read "And God saw that it was good." And finally, "God saw all that he had made, and it was very good."

These opening verses of Genesis portray God as a creator and ruler, with mankind – you and me – the pinnacle of that creation and made

in that image. In verse 28, God's first words to mankind instruct them to:

> *"Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground."*

In other words, mankind is to be creative, to be fruitful and to increase in number, and to rule over creation. We are made in the image of God to be creative and to rule.

Chapter 2 of Genesis introduces another aspect of God's image that is reflected in mankind – the need for relationships. In verse 18:

> *The Lord God said, "It is not good for the man to be alone. I will make a helper suitable for him."*

It is not good to be alone, we are made for relationships. There is a wonderful picture in the next couple of verses describing God and Adam working together as they tidy up the details of creation:

> *Now the Lord God had formed out of the ground all the wild animals and all the birds in the sky. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name. So the man gave names to all the livestock, the birds in the sky and all the wild animals.*

We have a lovely picture of God and the man playing this naming game together. God brings the animals and birds to Adam, and Adam names them. It's a close collaborative relationship between man and his creator as Adam helps God.

But who is going to help Adam? God's answer is another person, woman. Man and woman are made for a special relationship with each other. A man leaves his father and mother and is united to his wife, and they become one flesh. People are made for relationships – relationships with God and relationships with each other, especially between man and wife.

After the first two chapters of Genesis, we see humans in the image of God, made to be creative and to rule, and made for relationships with God and with each other. Rule and relationships. It's a wonderful picture.

But then comes Chapter 3 and the fall. Mankind shows itself unfit to rule and breaks the relationship with God. That is our world today – a world of imperfect rule and broken relationships.

Where do robots and artificial intelligence fit in that imperfect, broken world?

Synthetic emotions

Human beings are social animals. Our interactions with other people are informed by the inferences that we make about their emotions from facial expressions, vocal expression, and body posture and gestures. This understanding of mental states shapes the decisions that we make, governs how we communicate with others, and affects our performance. The ability to attribute mental states to others from their behaviour, and to use that knowledge to guide our own actions and predict those of others is known as theory of mind or *mind-reading*. It has recently gained attention with the growing number of people with Autism Spectrum Conditions, who have difficulties mind-reading.

People express these social signals even when we are interacting with machines, but computer interfaces currently ignore them. Computers lack emotional intelligence. Recent advances in psychology have greatly improved our understanding of the role of affect in communication, perception, decision-making, attention and memory. At the same time, advances in technology mean that it is becoming possible for machines to sense, analyse and express emotions. *Affective computing* explores the relationship between these advances and is bringing them together to endow computers with emotional intelligence.

Mind-reading computer systems have been developed that infer mental states such as enjoyment, agreement, interest and confusion from facial expressions in real time by using a combination of computer vision, machine learning and software engineering (el Kaliouby & Robinson, 2004). The applications encompass all aspects of human-computer interaction. On-line teaching systems can monitor a student and adjust the pace and content of a lesson as it detects interest or boredom, understanding or confusion. Telematic systems in cars can monitor the driver's cognitive load and suppress interruptions from the vehicle when the driver is overloaded. Medical applications include diagnosing depression or sensing pain. Teleconference systems can use the information to break down the artificial barriers presented by a screen.

Commercial applications of the technology are beginning to arrive on the market. Systems have been deployed on a large scale to evaluate video content by measuring audience engagement with media presentations and tracking their responses to brand identities. The increasing sensor capabilities and processing power on smartphones has allowed the technology to be ported to mobile platforms, enabling a host of new digital experiences from games that adapt to your emotions to wellness apps that monitor your mood.

Mental states

Charles Darwin published *The expression of the emotions in man and animals* in 1872 (Darwin, 1872), exploring the role of emotional expression in communication between humans. Over a century later, Rosalind Picard at MIT observed that effective communication between people and computers also requires emotional intelligence; computers must have the ability to recognize and express emotions (Picard, 1997). The study of affective computing has blossomed subsequently.

Boredom

Confusion

Fear

Happiness

Sadness

Surprise

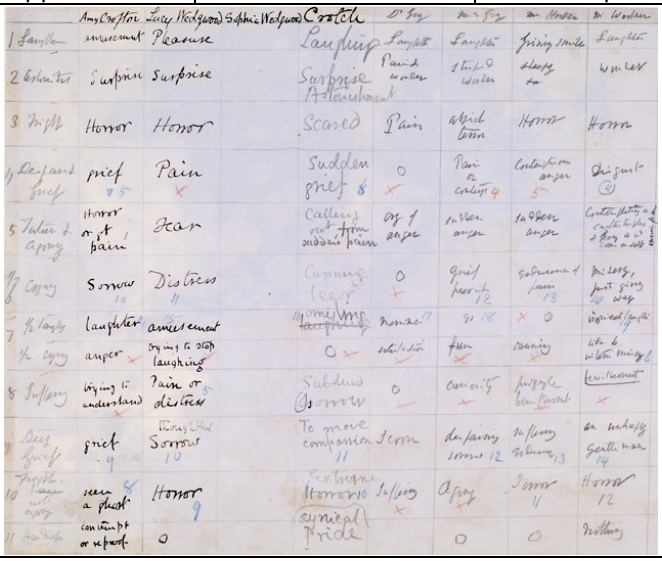

Figure 1: Some of Duchenne's photographs and Darwin's spreadsheet analysing perceptions

Darwin was interested in the universality of emotional expressions, which could give an evolutionary advantage to humans. He investigated this using photographs from the French scientist Guillaume Duchenne de Boulogne who had been considering the stimulation of facial muscles using electric shocks. Darwin invited guests at his house to examine the photographs and say what emotion they saw in them. The results were entered in a spreadsheet, with rows for each picture and columns for each assessor. Their agreement convinced Darwin that the expressions were, indeed, universal.

Darwin considered seven categories of emotion in his work. A century later, Paul Ekman at the University of California refined this into a classification of six basic emotions – anger, disgust, fear, joy, sadness and surprise (Ekman, et al., 1972). The six basic emotions and Ekman's Facial Action Coding System (FACS) have been widely used in the study of emotions over the past 35 years, and particularly for work on affective computing in the past 15 years (Ekman & Friesen, 1978). However, they are not particularly representative of people's everyday experiences.

Later work by Simon Baron-Cohen, who directs the Autism Research Centre at the University of Cambridge, has led to a new taxonomy of human emotions based on a linguistic analysis (Baron-Cohen, et al., 2002). 412 distinct emotion concepts were identified and grouped into 24 disjoint categories. These broader categories include Ekman's six basic emotions and 18 further groups that cover complex mental states reflecting cognitive activity – conditions such bored, interested, sure, unsure, thinking and so on. These require a few seconds of continuous observation to be recognised by humans, rather than the single image that suffices for basic emotions. However, they are more representative of people's everyday emotions.

James Russell at the University of British Columbia took a different approach by deriving a continuous, dimensional classification in his *Circumplex* model of affect (Russell, 1980). This was formulated in the light of an experiment in which participants arranged 28 emotion

words around a circle, with similar affects located close to each other and inverses on opposite sides of the circle. Principal Component Analysis was then used to identify various dimensions in the data. The first two components accounted for 46% of the total variance, and the next three only an additional 13%.

These two components are usually referred to as *valence* (running from negative to positive) and *arousal* (running from passive to active). The further axes have been given names like *intensity*, *expectancy* and *tendency* (inward or outward). This has led to a popular belief that emotions can be measured precisely by coordinates in a suitably high-dimensional space. Unfortunately, this is not true and any computation involving emotions must be designed to handle ambiguity and uncertainty (Robinson & Baltrušaitis, 2015).

Recognising emotions

Although Darwin concentrated on facial features to convey emotions in his book on emotions, he also mentions vocal sounds, other sounds, body posture and gesture, and physiological responses as further indications of emotion. All of these channels have been considered as ways of automatic monitoring emotion in humans, although these sensors used for some are more invasive than for others. Wiring a person with electrodes to measure their heart rate, breathing and skin conductivity is likely to provoke unwanted emotions! Signals that can be monitored non-invasively using cameras and microphones are much more suitable.

Facial expressions

People routinely express their mental states through their facial expressions and this is one of the clearest channels for communication. Inference from facial expressions has been studied using a variety of techniques – rule-based classifiers, neural networks, support vector machines, and Bayesian classifiers – but mostly restricted to six basic emotions. Recognising complex, cognitive mental states is more difficult, but probably more useful as part of general interaction with

computer systems. It is now possible to build a fully automatic system for recognising emotions that requires no human intervention and which operates in real-time on commodity hardware.

A great deal of data is needed to determine the timing characteristics of people's expressions and to train the statistical classifiers used in the inference system. Baron-Cohen's Mind Reading DVD (assembled to teach children with high-functioning autism spectrum conditions to recognise emotions) proved ideal for this purpose. An evaluation considered six conditions drawn from five of the 24 emotion groups and including 29 of the underlying mental state concepts, and chosen to be particularly relevant for human-computer interaction. For a mean false positive rate of 5%, the overall accuracy of the system is 77%. The system also generalises well to faces not included in the training data. An alternative system estimates continuous measures of valence and arousal.

Non-verbal aspects of speech

The voice provides another significant channel for the expression of emotions. Features such as the pitch, energy and tempo can reveal a lot about the mood of the speaker. There are no characteristic features that indicate particular mental states but it is possible to distinguish between two emotions using a small number of features, with a different set of features required to distinguish those emotions from others. The most successful approach is to calculate a large collection of about 170 features for each utterance. A training phase uses data mining to identify the features that separate each pair of emotional conditions. The operational phase then uses these pair-wise comparisons as preferences in a voting scheme to give an overall ranking.

Evaluation separated nine conditions with an accuracy of 70%, increasing to 83% if multiple winners were considered. The approach also generalises well to speakers other than those used for training, and even to other languages.

Body posture and gesture

The third natural channel for expression of emotions includes body posture and gesture. However, characteristics indicating what movement is being considered and which person is doing it must be discounted before it is possible to analyse how it is being done. Movement involves an individual bias, so the analysis is harder than for facial expressions or voice.

The solution is to break complex motions down into a system of isolated elements whose dynamic cues can be used to distinguish affects. This is similar to the process of breaking continuous speech into phonemes. As with affective analysis of speech, pair-wise comparisons are used on individual motion segments, and each segment is classified using a majority vote. A complete motion is then classified by a majority vote of its component segments.

The method was tested on a corpus of about 1200 motion samples, representing roughly equal numbers of four expressions of four different actions. The average recognition rate of 81% is comparable to the rates achieved by human observers of similar data.

Expressing emotions

Until recently, robots have been divided into two quite separate categories – industrial robots used in manufacturing that are powerful but need to be isolated behind safety barriers, and domestic robots that meander round the home but are too weak to do much more than clean the floor and serve drinks. However, service robots with sufficient strength to be harmful as well as useful are beginning to be deployed in domestic environments. A typical application might be care of the elderly at home where the robot would assist a health care professional with tasks that require physical strength. The robot must be sensitive to the unspoken mental states of both the patient and the carer and must also reassure them through its own expression.

Humans routinely convey empathetic responses through involuntary facial mimicry, and this extends to human-robot interaction. An experiment showed that conversation between a participant and a robot is enhanced when the robot mimics the subject rather than moves randomly. This raises questions about the degree of human-likeness required in the appearance of robots that interact with humans. A further experiment investigated participants' empathy for robots shown in film clips, and the responses were directly correlated with human-likeness.

The technology has been tested using a high-fidelity robotic head which simulates movement disorders such as dystonia that might be encountered by trainee doctors, and its use is currently being investigated as a possible intervention in autism therapy.

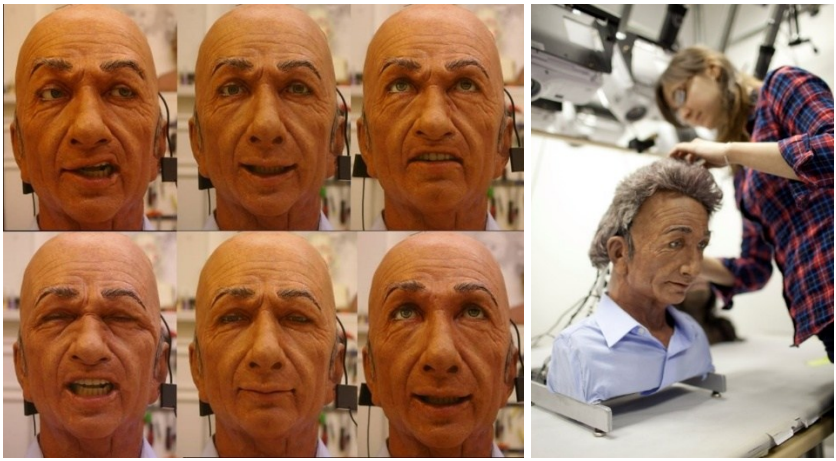

Figure 2: A humanoid robot used to examine participants' reactions to emotional expressions

Applications

An early application of affective inference is monitoring cognitive load in command-and-control systems. Driving a car provides a good model for this. Driving is becoming increasingly difficult with increasing traffic densities combined with distractions from in-car

technologies such as mobile phones and satellite navigation systems. Drivers coping with busy traffic in an unfamiliar city while late for a meeting are not helped by a navigation system that warns them that an oil change will be needed in another 1000 miles or even instructs them to make a U-turn. An emotionally aware car would help by suppressing phone calls, turning the radio off, and even allowing drivers to proceed in the wrong direction until they had recovered their composure.

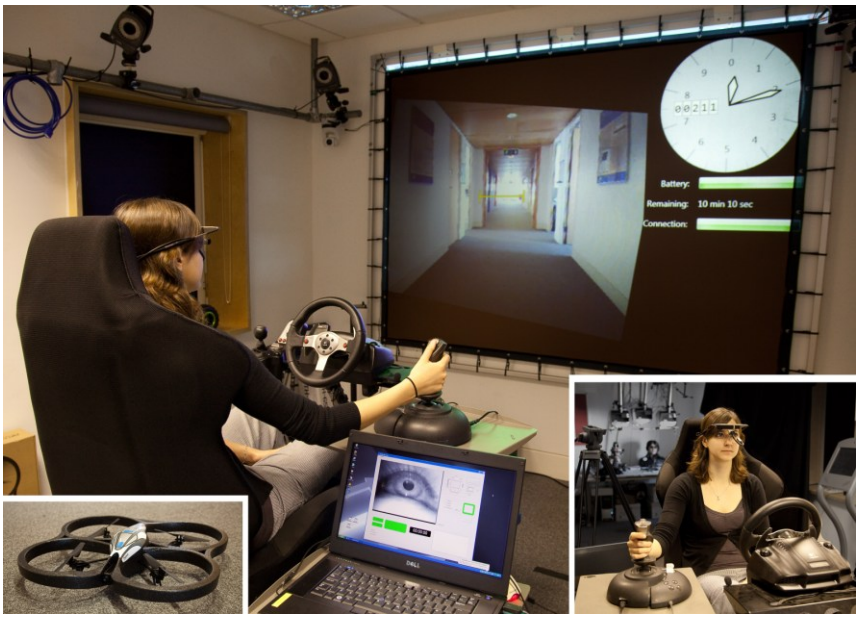

Figure 3: A simulator to investigate drivers' signs of cognitive overload

However, it is difficult to construct repeatable experiments using real cars on real roads. A common approach is to use simulation which allows controlled experiments, but fails to engage participants. An alternative possibility is the use of remotely controlled vehicles. Participants are located in the laboratory where they can be monitored easily, while controlling a real vehicle that is undertaking a task in a real environment. We have found that remotely controlled helicopters engender a particularly strong sense of emotional investment.

More importantly, inferring someone's mental state is not a precise science. People routinely misread each other's social signals and it would be foolish to expect computers to be any more accurate. Expressions of emotions are inherently ambiguous and using this sort of information in automatic systems requires careful consideration of human factors as well as intelligent use of probabilistic computing.

In particular, an affective inference system should not be regarded in the same way as a piece of precision measuring equipment. It seems unlikely that it will ever be possible to point a camera at somebody and read their emotions. A more practical approach is to formulate a set of perhaps half a dozen conditions to be distinguished in a particular application. For example, it might be useful to know if a car driver is comfortable, pleased, bored, drowsy, concentrating, confused, upset or, indeed, none of these. Each of these conditions would be populated with 5 to 10 of the emotion concepts in Baron-Cohen's taxonomy, and the machine learning systems trained to distinguish them.

The resulting analysis would only operate across a small subset of the entire gamut of human emotions, and statistical measures could be calculated to indicate the confidence with which the conditions could be separated. The same statistics could be used to attach "signal strength" indications to the inferences, making the ambiguity clear to any other systems that relied on them. Many modern computing systems require this sort of careful engineering to handle uncertainty in a principled way.

The steadily increasing power of computing hardware, combined with reductions in size and power consumption, means that these sorts of systems will soon be usable on portable equipment such as smartphones. This will open up many exciting applications from games to health care.

The triumph of technology

The invention of the transistor in 1947 and the production of the first integrated circuit in 1961 have been followed by 60 years of extraordinary progress. The number of transistors on a single integrated circuit 2cm square has doubled every two years, rising from 4 in 1961 to 8 billion in 2023 (Roser, et al., 2023), while the cost of the chip has remained roughly constant at a few dollars. This has made phenomenal amounts of computing power available cheaply. The volume of data available on the World-Wide Web has grown at a similar rate since its introduction in 1989. Together these advances have allowed the development of computer systems that can simulate many facets of human intelligence.

Steady progress with scientific understanding of human psychology has matched the advances in technology. Public perceptions, on the other hand, have leapt ahead, based as much on fiction as on fact. There is a long history in fiction of men creating beings in their own image – from the golem mythology of Jewish folklore, through Mary Shelley's Frankenstein, the 20th century robots described by Karel Čapek (Čapek, 1921), Fritz Lang and Isaac Asimov, through to modern drama such as Westworld and Humans. In all of these, the machines are depicted as resembling humans and develop sentience independently from their masters, usually turning against their creators. These depictions are curiously at odds with robots in real life.

It may help to distinguish mechanical robots from automatic systems embedded in the world around us (Cameron, 2017). Mechanical robots include not only the homicidal cyborgs of fiction but, more importantly, industrial and domestic machines that perform boring tasks or those requiring great precision. Increasingly, they also include toys. These offer clear benefits or entertainment, but also present some challenges in changing the nature of employment.

Embedded systems, on the other hand, range from satellite navigation in cars, through internet search engines, to automated financial

trading. The word 'robot' should be understood to include any system that senses its environment and can affect it autonomously (Cerf, 2013), and these hidden systems are more insidious. There are obvious dangers in the deployment of autonomous weapons by the military, but the dangers of relinquishing control of our financial systems, energy infrastructure or even cars to autonomous systems are just as worrying.

Technology moves very quickly. Recent developments and future possibilities range from robots in the work place that are already replacing blue-collar workers through to intelligent systems that might soon replace white-collar workers in professions such as medicine and law. Robotic toys are growing in popularity, both as conversational dolls for young children and as companions for the elderly. There is obvious value in these, but also a warning that we are delegating to machines the personal relationships for which we were created. Something has gone seriously wrong with our relationships when a mother post messages to her 'friends' on a smartphone while her child has a conversation with an electronic doll.

We were made in God's image to rule and for relationships, with him and with each other. Are we delegating that rule to machines? Are we sacrificing human relationships for something synthetic?

Indeed, we should think carefully about our own relationships with people and with machines. It is often convenient to anthropomorphise machines, especially when they display human aspects in their interactions or even their physical appearance. Speaking to a machine and listening to its response or interacting with a machine that happens to be wrapped up so that it that vaguely resembles a person should not fool us into thinking that it actually is a person.

Humankind's relationship with God and delegated rule were broken at the fall. We no longer enjoy the same relationship with God and our rule is imperfect. Failures by computer systems are not a sign of their

original sin but are a reflection of imperfections in their human creators.

This puts the nascent "robot rights" movement into perspective (Henderson, 2007). Robots are not genuinely free agents but are merely remotely controlled by their human designers (possibly separated from them in time as well as by distance). They may give an appearance of appreciation and express emotions, but it is only a simulation. They may follow our direction in undertaking tasks, but that is not the same as exercising the sort of responsibility that earns rights.

Some people are even talking about the 'singularity' when robot intelligence overtakes human intelligence (Kurzweil, 2005). This is more speculative, but still serves to keep us aware of possible dangers. However, there are immediate questions that need to be asked about autonomous weapons and social media, both of which are already having harmful effects. These dangers are just those inherent in any system created by people who are either cavalier in their motivation or lack competence. These are the general issues facing any profession but can easily be left behind with the rapid pace of change in technology.

Artificial intelligence

The term "artificial intelligence" is used very broadly: sometimes for marketing ("This vacuum cleaner has AI"), sometimes for scaremongering ("Humans face extinction as a result of AI") and sometimes just as an impressive term for computer ("The AI got my bank statement wrong"). Computer scientists have used AI to refer to any problem that looked difficult and then gave it a more prosaic name when the problem was solved. It would have been helpful if Herb Simon's description of it as "complex information processing" had been adopted instead of John McCarthy's punchier "artificial intelligence" back in 1955 (Kline, 2011).

Humanoid robots are an interesting distraction, but the real dangers lie with the computer systems embedded in the world around us that Vint Cerf identified in his notion of a robot.

Artificial intelligence is simply a machine performing a cognitive process like a person. Recent developments in AI often use machine learning. A large collection of real-world data is analysed to build a statistical model which can then be used to predict responses to unseen stimuli. This underpins recent advances such as facial expression analysis, automatic language translation, prediction of protein structures, fraud detection for credit cards, autonomous vehicles and so on.

Machine learning underpins recent advances in Large Language Models (LLMs) and transformers (Vaswani, et al., 2017) that has given rise to conversational systems such as ChatGPT. (The GPT stands for generative pre-trained transformer.) The LLMs are constructed by taking vast corpora of natural language and building statistical models that encode probable sequences of words. This is a bit like text prediction on a smartphone but on a much larger scale, considering sequences of hundreds of words.

Given some input text as a prompt, the resulting systems generate sequences of words that are related to the prompt and that follow normal language patterns. This gives an impression of intelligence. However, the systems have no understanding and a more prosaic description might be "stochastic parrots". Given the prompt, they produce plausible text driven by probabilities. This is also exposed in their tendency to 'hallucinate', that is, to produce text that appears intelligent but has no basis in reality.

The same technology underpins social media. Publishers like YouTube, Facebook, WhatsApp, Instagram, WeChat, TikTok and so on want to make money by selling advertising. They can sell more advertising if they can engage the user and retain their attention for longer. This involves accumulating a large body of data by recording each user's

activity and using this to build a statistical model that models their interests. This can then be used to predict what else would retain their attention while they are shown more advertisements. Likewise, they can model each user's network of contacts and use that to expand their clientele. Advertising, engagement and growth.

This model of social media has had undesirable side-effects. Users are only shown material that matches their earlier interests, so their preconceptions are never challenged. More importantly the social media become a substitute for the relationships that are fundamental to humanity.

Again, fiction offers us some useful examples. *The machine stops* describes a society where people live in isolation and relationships are mediated through technology (Forster, 1909). People's attention span has shrivelled, their relationships become superficial, and they are challenged by a failure of the technology. Imagine today's world trying to survive for more than a few hours without the internet.

Brave new world describes a world in which people are reduced to passivity by a flood of information (Huxley, 1931). They no longer care about their autonomy. By contrast, *1984* describes a world in which people are deprived of information and controlled by a surveillance state (Orwell, 1949). They are no longer allowed autonomy. Modern technology presents both risks: we drown in trivia while surrendering ourselves to increasing levels of surveillance through our mobile phones.

These represent the real dangers of artificial intelligence. A large group of distinguished scientists wrote an open letter in 2023 arguing that mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks such as pandemics and nuclear war (Center for AI safety, 2023). They identify five areas of risk: the loss of human skills, bias in machine learning, election disinformation, social control and autonomous weapons. The new European AI Act aims to regulate these challenges (European Paliament, 2023) .

The image of God

Computer systems can infer a people's mental states from facial expressions, tone of voice and body posture and gesture. Computers can even display emotions through animated cartoons, physical robots and language. Do these synthetic emotions mean that they also share the image of God? The account of creation in Chapter 1 of Genesis showed God's image in His creativity, rule and relationships. But we can also see a person's image in his or her children. Children resemble their parents in their characters as well as in their physical appearance. So we see the image of God most clearly in Jesus. As Paul says in Colossians 1:15:

> *The son [Jesus] is the image of invisible God, the firstborn over all creation.*

John's gospel starts by telling us that Jesus was with God in the beginning, at the creation. And John 3:16 tells us that Jesus came to restore the relationship between mankind and God that was broken at the fall. This shouldn't come as a surprise. God loved Adam and Eve, even after they broke his rule. God declared his punishment in Genesis 3, but then it was God who made garments of skin for Adam and Eve and clothed them. The whole Bible is the story of a loving God desperate to restore the broken relationship with mankind, and mankind failing to respond.

Like father, like son, we see God's image in Jesus' death on the cross. In the words of John 3:16:

> *For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life.*

We see an extraordinary, sacrificial love which demands our response. You and I and all of fallen mankind can never be good enough to earn a restored relationship with God. All we can do is accept the amazing gift of God giving his one an only son to take the punishment that we

deserve. If we accept that gift, we need not perish but can enjoy eternal life in a restored relationship with our creator.

There we see most clearly the difference between men and machines. God loved his creation – mankind – so much that he gave his one and only son to restore his relationship with them. I am very fond of the machines that I make, but there is no possibility that I would give my son to restore them if they were broken. In the words of the creed, it is the difference between being begotten and being made. Humans are begotten and machines are made. There is a clear difference.

The challenge for Christians is to exercise rule and enjoy relationships as God intended. Robots – in the form of autonomous systems and artificial intelligence – may have a role to play in assisting us in those, but God still expects us to rule wisely and maintain our relationships with him and with each other. We remain responsible for ensuring the motivation and competence of those building and deploying robots, and we must be careful to distinguish simulations from the real thing. Only then can we engage with changes in the world around us and bring biblical perspective to bear on them.

Our relationship with our creator God remains a fixed point as the world around us changes. And that relationship is restored through Jesus. It is what makes us human rather than automata.

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In Memoriam

In recent year's we have lost some significant figures from the life of Faith & Thought. In the October 2024 edition of this journal, we wrongly listed Alan Millard as a Vice President after his death in June of that year. We apologise for this error and are grateful that it was pointed out to us. This prompts us to revisit the memories of a few other long-serving members of the Victoria Institute.

What follows are not formal obituaries so much as a collection of personal memories and links to some of their writings in our journal. We give thanks to God for faithful lives well-lived and we extend our condolences to their families and friends.

Alan Kerry (Editor and Administrator)

To follow the hyperlinks in the text please access the PDF version of this journal on the website here:
https://www.faithandthought.org/subscribers-only.html

Reginald Luhman (1942 – 2023)

Reg was the head of Religious Studies at Westcliff High School for Boys in Southend on Sea. He served as Editor of Faith & Thought from 2005 to 2016, but his connection to the organisation goes much further back. In 1990 his submission won the Gunning Prize Essay and was published as 'Who Was Adam? Palaeoanthropology and the Bible,' (Faith & Thought, no. 9 (April 1991) Available Online Here).

It was Reg who encouraged me to offer my services as administrator to the charity and it was always a great pleasure to share a car journey to Council meetings with him (in the days when such meetings were held in person!). He had an endless and infectious enthusiasm for all matters of theology, especially its relation to contemporary matters. A mutual friend, Steve Feist gives this recollection:

Reg was quite a bit older than me, but we had a common interest in theology, discussing the Bible and generally talking religion. If we met up early in the week we would dissect the Sunday sermon, sorry Jeff! We disagreed on politics, we disagreed on theology sometimes, but that was what made for an interesting discussion. We loved it. And the icing on the cake? He sometimes found my own novel ideas on eschatology … persuasive, shall we say. Reg loved to talk about the subject he trained in and I loved picking his brains. He always pointed out, when I thought I'd made some interesting point, where I was on the spectrum of theological heresy, "That's modalism," he would say or, "that's a very syncretic view," or some other objection in need of explanation to an untrained amateur not-quite theologian like me. It was such a pleasure to discuss with someone who could take an objective view; it taught me a lot.

Reg's other publications in Faith & Thought include:

- 'Morality and Religion' Faith and Thought, no. 105 (1978): 29-35. Available Online Here
- 'God-Talk in the Academic Common Room,' Faith and Thought, no. 107.1 (1980): 34-46. Available Online Here
- 'Ethics of Scientific Research: Can Embryo Experiments be Justified?' Faith and Thought, no. 112 (1986): 109-117. Available Online Here
- 'Christian Belief in the Afterlife in the Light of Science and Philosophy' Faith & Thought, no. 41 (2007): 6-16. Available Online Here

Alan Millard (1937-2024)

Alan Millard was a world-renowned orientalist who spent most of his professional life working at the University of Liverpool.

He was elected as Vice-President of Faith & Thought in May 2003. He would regularly send me emails about the journal or the symposium, which were always extremely helpful, especially as I was finding my feet as a novice journal editor. Judging from the comments on his official obituary I was far from alone in finding him unusually supportive and encouraging. He had a warm and easy sense of humour and his contribution to the 2019 Symposium on 'Fake News' was a high point for me. The video of this presentation (a narrated PowerPoint) is available here: https://www.faithandthought.org/2019-symposium.html

Alan's other publications in Faith & Thought include:

- 'Archaeology and Ancient Israel,' Faith & Thought 108.1, 2 (1981): 53-62. Available Online Here
- 'The Old Testament and History: Some Considerations,' Faith & Thought 110.1, 2 (1983): 34-53. Available Online Here
- 'The Bible and Archaeology: Friends or Foes?' Faith & Thought, no. 43 (2007): 15-24. Available Online Here
- 'The First Christians: Archaeologically Invisible?' Faith & Thought, no. 45 (2008): 5-14. Available Online Here
- 'The Babylonian Flood Story – A new tablet and an old one misrepresented,' Faith & Thought, no. 60 (2016): 22-25. Available Online Here
- 'Is the Bible Fake News? The Verdict of Biblical Archaeology,' Faith & Thought, no. 67 (2019): 3-14. Available Online Here

For a formal obituary visit: https://news.liverpool.ac.uk/2024/06/14/obituary-professor-alan-millard/

John Warwick Montgomery (1931 – 2024)

JWM was Professor in Law at the University of Bedfordshire from 1995-2007 and Professor of Philosophy and Christian Thought at Patrick Henry College, Virginia USA from 2007-2014. A polymath by nature he published widely, gaining a reputation as one of the leading apologists of his generation. He was most proud of his Tractatus Logico-Theologicus, which he referenced frequently in his contributions to Faith & Thought.

He became vice president of Faith and Thought in May 2004, serving until his death. When in 2022 we briefly toyed with the idea of becoming a 'peer-reviewed' journal he emailed me to advise against this saying:

> *In my view, peer review is not a good idea. You discourage submissions because of much delayed publication dates and you vastly increase your own administrative task. The results of peer reviewing have never been proven significantly different and peer review has not curbed faked research papers. The idea is, of course, politically correct, but you may well view that as a minus, not a plus.*

Such clarity and decisiveness was very refreshing and extremely helpful. It was lovely to meet him in person at the 2019 symposium.

JWM's publications in Faith & Thought include:

- 'The Lord Denning (1899- 1999). An Appreciation,' Faith & Thought, no. 26 (1999): 3-5. Available Online Here
- 'Did Christ die for E.T. as well as for *Homo* Sapiens?,' Faith & Thought, no. 36 (2004): 3-19. Available Online Here
- 'Pain in Theological Perspective', Faith & Thought, no. 42 (2007): 1-9. Available Online Here
- 'The Last Meow: An Indeterminacy Argument for God's Existence, with a Further Glance at Schrodringer's Cat,' Faith & Thought, no. 53 (October 2012): 2-7. Available Online Here

- ‘Mathematics and Apologetics: Leonhard Euler (1707-1783)’, Faith and Thought, no. 65 (2018): 3-15. Available Online Here

For a formal obituary visit:
https://www.apologeticsacademy.eu/PDFs/JWM_full_obituary_footnotes.pdf

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Duncan Vere (1929 – 2022)

Duncan worked as The London Hospital, Whitechapel for his entire career, including 30 years as a consultant physician. He was Professor of Therapeutics and, by coincidence, was my personal tutor when I was a medical student in the 1980s. Upon qualifying I was honoured to work for him as his houseman and found him to be a superb boss in those days of 100+ hour weeks for junior doctors. He was generally serious in manner but I do remember one joke he made on a ward-round which is sadly not fit for publication!

He was elected to the council of Faith & Thought in May 2003 and stepped down in 2013. His publications in Faith & Thought include:

- ‘Does Man's “Dominion” O’er Nature Include the Natural World Within Himself?’ Faith and Thought, no. 111.1 (1985): 57-64. Available Online Here
- ‘Death and the Outcast; a new discovery relevant to Biblical studies?’ Faith & Thought, no. 38 (October 2005): 32-33. Available Online Here
- ‘Whence are Ethics, Whither go they and Why Do Medical Ethics Matter?’ Faith & Thought, no. 48 (April 2010): 29-36. Available Online Here
- ‘Unreasoned atheism, unreasoned reality,’ Faith & Thought, no. 53 (October 2012): 7-15. Available Online Here
- ‘Before the First Day,’ Faith & Thought, no. 55 (October 2013): 17-19. Available Online Here

For a formal obituary visit:
https://history.rcp.ac.uk/inspiring-physicians/duncan-wright-vere

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Kenneth Kitchen (1932-2025)

Kenneth Kitchen was a renowned biblical scholar and Egyptologist. He is often remembered as a maximalist who rejected the documentary hypothesis but his critics could never deny the extent of his thoroughgoing scholarship. Peter Williams of Tyndale House asserts that:

> *For parts of his life, he may have been the person who had read a greater variety of ancient Near and Middle Eastern texts than anyone in the entire world.*

Ken published widely between 1962 and 2023, and in 2007 offered this piece for publication in Faith & Thought.

- 'The Old Testament in its World Today' Faith & Thought, no. 43 (2007): 3-14. Available Online Here

For a formal obituary visit:
https://tyndalehouse.com/updates/news/kenneth-kitchen/

Minutes of Annual General Meeting for 2025
THE VICTORIA INSTITUTE

Saturday 10th April 2025

Croxley Green Baptist Church, Baldwins Lane, Croxley Green, Herts WD3 3LH

Council members present:

Rev R. H. Allaway(Chairman)	
Dr D. Instone-Brewer	
Rev J. D. Buxton	
Dr A. P. Kerry	(Hon. Secretary)
Rev. Dr S. Nelson	
Mrs J. Mead	
Dr D. Watkis	(Treasurer)
Dr T. Kantchev	Reviews Editor (S&CB)

13 individuals attended the April 2025 Panel Event in person, and 18 online via Zoom. 11 members in total remained for the AGM

OPENING

Rev. R Allaway welcomed members and opened the meeting in prayer.

MINUTES OF PREVIOUS MEETING

Copies of the minutes of the 2024 AGM were available on the website. These were approved as a correct record and signed by the chairman.

ELECTION

The meeting agreed to the election or re-election of the following:

a) President - Professor David Wilkinson

b) Vice-Presidents - Prof. Malcolm A. Jeeves, Prof. Sir Colin J. Humphreys were re-elected. Rev Dr John Weaver was elected as a new Vice President.

The deaths of former vice-presidents Alan Millard and John Warwick Montgomery were noted and the chairman offered a prayer of thanksgiving for their lives and service.

c) Honorary Treasurer – Dr David Watkis

d) Council Rev. Bob Allaway, Rev. John Buxton, Dr Alan Kerry, Mrs Joanne Mead, Rev. Dr Sally Nelson, Dr David Instone-Brewer and Dr David E. Watkis as Council members for a further three years. Dr Todd Kantchev is an ex-officio council member as the Reviews Editor for Science and Christian Belief.

ANNUAL ACCOUNTS

The completed 2024 annual accounts have been independently examined and were presented. The year-end shows a small profit, but there are outstanding expense from the 2024 symposium. The end of year cash balance was £7971.85 and share valuations totalled £126,648.
The meeting agreed that independent examination of the annual accounts would continue to be our practice even though this is not a legal requirement as our annual income is less that £25,000.

The current financial situation is satisfactory, with balances of £9749.22 (bank account) and £113,467.44 (investments). A budget for 2025 has been prepared which anticipates a deficit of £2385.

PLANS FOR 2026

Council have agreed the them of 'Money' for the 2026 lectures, which will follow a similar, though not identical, format to this year's events comprising online lectures and a hybrid panel event.

Alan raised the question of the future of F&T if he were to step down from his role as administrator. Council's view is that we would need a new person to join council to take on some of these roles, or alternatively, F&T might need to consider whether to wind up its activities and merge with another organisation (such as Christians in Science). Members were asked to consider this and contact the administrator if they have any suggestions or wish to volunteer their services.

CLOSE The Chairman closed the meeting in prayer.

New Vice President
Revd Dr John D Weaver, BSc, MA, PhD

I began my working life as a structural geologist completing BSc and PhD degrees at the University of Wales, Swansea. I was appointed a Lecturer/Senior Lecturer in Structural Geology at the University of Derby (formerly Derby College of Higher Education).

Following a call by God I undertook training for Baptist ministry at Regent's Park College Oxford, completing an MA in Theology (University of Oxford). I was called to be the minister of Highfield Baptist Church, Rushden, Northamptonshire.

After ten years in pastoral ministry I returned to Regent's Park College Oxford as Tutor and Fellow in Pastoral and Practical Theology. While at Oxford I explored the relationship between Science and Faith, receiving a Templeton Foundation Award in 1998. I have written three major texts on Science and Faith focusing much of my work on Environmental Theology. After a further ten years I was appointed Principal of Cardiff Baptist College (formerly South Wales Baptist College) and Dean of the Faculty of Theology, Cardiff University. While in Cardiff I served as Chaplain to Cardiff City Football Club.

In retirement I continue to preach and lead services at a variety of Baptist and Anglican churches together with my continued research into Environmental Theology, and the relation of faith to work. This latter area has seen the production of a number of texts jointly on behalf of the Industrial Christian Fellowship (ICF) with Ian Arbon, Ian Randall, and Phil Jump. As part of this project Phil and I have prepared a roadshow to encourage congregations to explore ways in which their faith can help them to live in workplace situations.

For a number of years in the early 2010s and again at present I am an editor of Faith in Business Quarterly. I am a Vice President of the John Ray Initiative: Connecting Environment, Science, and Christianity (JRI), and I am currently the Vice Chair of ICF and have been part of this organisation for over ten years.

Webinar Review
Bob Allaway, Chairman of Faith & Thought Council

On Tuesday 18th February, Regent's Park College, Oxford, held a 'Lunchtime Webinar' with Dr Tim Middleton on 'Rethinking Theology in the Anthropocene'. He defined the Anthropocene as "the epoch of geological time during which human activity is considered to be the dominant influence on the environment, climate and ecology of the earth".

While we might think it obvious that human activity has so changed the atmosphere, etc., as to make an impact on geological strata, in practice, it is more difficult to define this precisely. Is it the development of agriculture? Is it the impact of the Industrial Revolution? Is it the spread of radio-active isotopes by nuclear testing? The latter is easily measured, but surely transitory. It is perhaps not surprising, therefore, that the concept had been formally 'rejected by scientists' in March 2024.

Still, the concept does help us to think about the place of humanity in the long-term scheme of things. One interesting idea, mentioned in passing, was that Genesis 1 climaxes on the creation of humankind, not because we are intended to dominate everything else, but because we are dependent on everything that has gone before. I find this both Biblical and scientific.

As well as looking back into geological 'deep time', we were also encouraged to think forward on a grand timescale, like the builders of medieval cathedrals. In this connection we were introduced to a saying attributed to Martin Luther: "Even if I knew that tomorrow the world would go to pieces, I would still plant my apple tree."

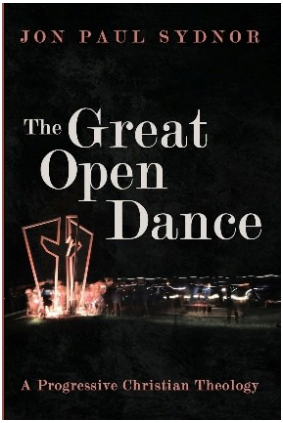
Is there a clash between such long-term thinking and Biblical eschatology? This is one of the things we have been exploring in our series of Faith and Thought seminars this year. I pointed out, in last minute comments, that, whether in long or short term, the Second Law of Thermodynamics means that this universe is ultimately doomed, unless God recreates it (as in Romans 8: 21), but Tim Middleton did not seem too interested in this.

Book Reviews

Jon Paul Sydnor

The Great Open Dance: A Progressive Christian Theology

Eugene, Oregon, Pickwick Publications 2024. 341pp. pb. £32. ISBN: 9781666775150



Toward the end of this engaging and provocative book, Sydnor sets out something of his intent saying 'this book is playful, creative and exploratory, more like a Jewish midrash. I'm not trying to "get it right." Instead, *my intention is to create a collage of scriptural passages, illustrative anecdotes, and reasoned arguments within which Christians and their communities can flourish.*'(262). This is not to say that the contents are merely a lightweight collection of stories, there is some challenging theology going on here which is wide-ranging, addressing environmental concern, affirming LGBTQ+ identities, encouraging interreligious dialogue and so on. Sydnor says that the 'uniting theme of this systematic theology is *agapic nondualism* [...] agape is the unconditional, universal love of God for all creation. Nondualism asserts that everything is fundamentally united to everything else' (35). This definition draws heavily on Eastern religions, seeking not just 'comparison' with Christianity but 'transformation of the self by the other.' I suspect that how well the book is received will depend greatly on how willing the reader is to have their own faith 'transformed' in this way, especially when this challenges previously held ideas of 'truth'. What is proposed is unashamedly 'progressive' – but is it true? Or is there heresy here?

At times it feels as though Sydnor drifts towards the gnostic. Referring to the Holy Spirit as 'Sophia' may not be especially problematic but elsewhere he sometimes seems to be advocating a higher way of living, within which the criteria for 'truth' becomes 'what works' to

achieve this higher goal. For instance he says 'many people who have lived their lives well have concluded that the world is truly non dual – a shimmering matrix of dynamic relations.' For this reviewer, Christianity is not true simply because it helps me to live my life well, it is true because the resurrection happened. And discipleship may not lead to an enlightened 'good life', rather towards the way of the cross. A utilitarian pragmatic approach to truth risks elevating human concerns above God's.

This might be a valid concern if the book set out to be a self-help manual, but it does not. The pragmatic angle of Sydnor's argument is always directed towards pastoral concerns and once this is understood the book stands as one of considerable merit. Anecdotes about the author's own church lend it convincing authenticity as it encourages an inclusive agapic non-dual approach towards others. One instance regards the celebration of Communion with children who were put off by the seemingly gruesome symbolism of flesh and blood. He writes 'our church believes that all good theology is pastoral theology, so we were more than willing to adapt tradition.'

For some, the question will be whether this progressive theology adapts tradition a little too far in some of the wider issues under examination. But surely a theology predicated on agapic love of the other is to be preferred to the alternative. The word 'progressive' may suggest that Sydnor is advocating something novel. Instead I would argue that this book fundamentally represents a return to a faith that always was based on love, as exemplified in the trinitarian dance of Abba, Jesus and Sophia, and for this reason, Sydnor's is a most welcome voice in today's world.

Alan Kerry is the administrator of Faith & Thought

The following book reviews appear in Science and Christian Belief and are re-printed here with kind permission of Christians in Science for the benefit of our members who have not signed up for online access to that journal. Members of Faith & Thought who wish to access S&CB online for the full content should email: admin@faithandthought.org

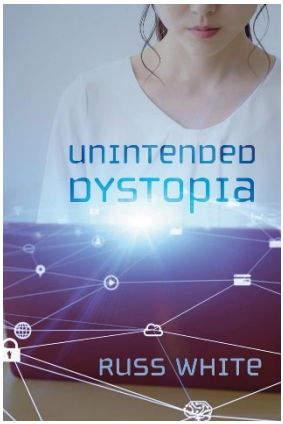
Science and Christian Belief

https://scienceandchristianbelief.org/

Russ White

Unintended Dystopia.

Eugene, Oregon: Cascade Books, 2021. 212pp. pb. £26. ISBN 9781725270473



Russ White is a network architect based in the US with Masters in IT and a PhD in philosophy. A Christian thinker, his engineering experience made him concerned with the scale to which network technology affects people's lives.

In Chapter 1 he defines a new term, *neurodigital media* (NM), representing the virtual world of the online user, formed of three different parts: *neuro*, because of its purpose to psychologically condition the online user; *digital*, because it relies on digital technology to analyse user data; and *media* because it is a specific form of communication and a system that provides it. The rest of the chapter examines retrospectively the extent to which technological 'progress' has been a governing force in society. Chapter 2 finds the intellectual roots of NM in the so-called *Californian Ideology* that, according to the

author, emerged from four cultural/technological components: the *radical autonomy* of the person, the *engineering mindset*, the idea of a *social progress through technology* and the *naturalistic* (materialistic) view of the world. During the cold war 1945-1991 the fight for parity in technology and dominance in space between the East and the West quickly moved the focus of innovation onto digital technology when California became the largest centre in the USA and resources were poured in Los Angeles and Sao Paolo, in companies like Intel, Apple, Xerox, HP, Cisco and others, and when ARPANET, the archetype of the Internet, was created. People behind these projects, according to White created a specific culture: 'curious, playful, communal, and yet individualistic, and possessing a strong aversion to authority' (36).

Chapter 3 engages the reader with the analysis of the person affected by NM. The theory is sufficiently anchored to the biblical narrative about personhood, built on four aspects: *meaning (purpose), freedom, dignity*, and *relationship,* explained in the book by contrasting the naturalistic against the Christian view. Chapter 4 then investigates the history of computing machines in order to trace their development in parallel with the rise of the naturalistic vision of reality. The history of the computer, told by the author however, is not very accurate, missing key conceptual moments in early computing like John von Neumann's architecture, which was conceptualised well before the UNIVAC's, and which was implemented on Williams tubes in the Institute for Advanced Studies USA. It missed also the first autonomous *stored program* SSEM project in Manchester UK, that proved the concept workable. In

Chapter 5 NM is explained according to the mission statements of the providers 'to build a world where everyone has a sense of purpose and community'(Facebook) or to 'connect the world's professionals to make them more productive and successful (LinkedIn). According to White, these mission statements are utopian because they stem from a naturalistic progressive vision of the reality, assuming people are fundamentally good and 'can be perfected by applying the right tools

and attitudes in the right way' (81). These objectives are mainly achieved by advertising as a primary source of revenue, based on measuring user's attention and engagement. Other uses include capturing data for political and social campaigns, government statistical analyses and surveillance. The chapter continues with some interesting statistics, which reveal the way digital providers operate.

Chapter 6 analyses how the dignity of the person, interacting with the NM, is affected. The concepts of human identity and dignity from the previous chapters are used to show that treating people 'as means to an end reduces their dignity'. 'The problem arises when human beings are treated solely as flattened representations and not as individuals' (94). Flattening happens in many different ways: through systems classification of people by reducing them to a list of attributes from their personal data, connections and habits; through user experience, by using their emotional triggers to 'hook' them and create a habit in order to sell a product or service; through objectification of people by the lack of personal presence and by removing all social cues from the interaction between two users, otherwise available face-to-face; through the information overload, which allows 'to treat people in information-rich environment as simple information sources, rather than individuals with dignity and value'; through the quantification of people in the pursuit of economic growth which makes personal worth to become synonymous of quantity. The bottom line is that NM 'encourages users to treat others as tools in a never-ending quest for full ego. This ultimately destroys the dignity of every user, because every user is both a performer and a critic' (113).

Chapter 7 underlines the importance of privacy for human dignity, highlighted in many verses of the Scripture (Gen 3:7, 3:25-27, 9:22, Prov. 11:13, Luke 6:12, Mat 6:5), the UN Declaration of Human Rights 1947 and other sources. White reveals various surveillance capitalism practices like data collection for tracking location of people or for recording how they use channels on smart TV boxes, face recognition, built not only in smartphones but in technology outdoors etc.

According to sources c.2016, 'law enforcement face recognition networks include over 117 million American adults' (123). While such practices are put in place by governmental agencies for security reasons, others as a part of the way online trade is conducted nowadays by private companies with user permission. However, 'Surveillance by private companies is not well controlled by governments at least in part because the governments want the information generated. So individual users cannot seem to rely on governments to solve this problem' (130)

Chapter 8 considers the impact on human freedom from digital technology which is mainly seen coming from the attempt to replace human decision-making in marketing. This was initially about seeking statistical certainty in risky businesses like insurance, but after WWI-WWII it focussed on utilising the massive manufacturing facilities built for the war effort, naturally leading to competing for growth. This competition resulted in enlarging the market by manipulating the habits and the choices of the consumers and by exploiting and controlling their behaviour. A good deal of research has been performed in using psychological techniques like nudging and habit formation. Arguments for and against these techniques are considered and evaluated, especially from the point of creating addictive behaviours. Chapter 9 describes how the naturalistic world view allows NM to break down human community by treating people like objects and by providing 'the theory and tools to manipulate those "objects"' (155).

White argues that all this leads to hollowing out relationships. He supports the claim with statistical evidence from many sources. It happens mainly because of flattening the real person in the virtual world and because of amplifying and encouraging strong emotional reactions, which usually develop more tempered in real world encounter. Chapter 10 concludes that 'Systems built using NM subvert human dignity through a process of flattening or the abstraction of the user to a reduced set of attributes for classification and analysis'. In

those systems 'Users also flatten one another through the quantification of relationships' (189). These systems 'distort the social order and harm the formation of the kinds of community Christian anthropology demands for individual humans…ultimately reducing each community to a single person'. They 'present a reduced form of friendship in which…users interact with datums rather than one another'. The 'threefold impact on the person—truncating freedom, subverting dignity and hampering community formation—leads to widespread depression and other social ills' (190)

Unfortunately, this brilliant analysis ends on a dystopian tone, as if leaving digital technology completely demonised with no other hope than the expectation for a new book from the writer. However, it is an interesting read for engineering minds like mine, without heavy theological constructs and doctrinal claims yet, with strong and responsible ethical stance, it is undoubtedly a serious contribution to the intersection of technology with Christian thinking. I recommend it with acclamation long overdue.

Todd Kantchev is Reviews Editor of Science and Christian Belief

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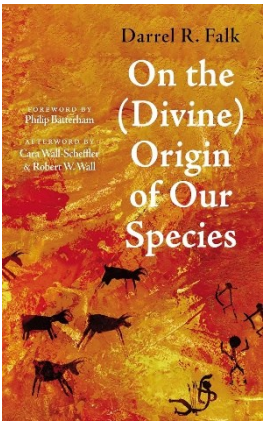
Darrel Falk
On the (Divine) Origin of Our Species
Eugene, OR: Cascade Books, 2023. 263 pp. pb. £24.00. ISBN 9781666757019



This book is written by an academic biologist, but it is aimed at the 'intelligent layperson'. The writing style is very clear and engaging, full of memorable illustrative examples, and essentially setting out a story. Its aim is to offer an account of human evolution that integrates scientific insights from disciplines that include genetics, palaeontology, anthropology and cognitive science, with the Christian story based in the Bible and subsequent theological traditions. This is an ambitious enterprise, and it is to Professor Falk's credit that it only

occasionally feels overwhelming in scope or too technical in this level of detail.

The science is strong and, coming out of many years' classrooms experience, helpfully explained with analogies; I shall steal the description of electrochemical transmission at neuronal synapses as tiny mouths and ears, and plant photosynthesis as a bespoke systems of solar panels for my own teaching. The philosophy and theology are relatively shakier and more reliant on the authority and rhetorical skill of others.

I would describe the book as essentially a form of Christian apologetics, which is often understood to be primarily a way of resourcing and supporting believers, demonstrating that their faith is rationally defensible and giving them confidence to speak in the public square (in this case of science and science-informed culture). Towards the end this is summed up in a chapter on God's providence in which the author sets out two possibilities: the development of *Homo sapiens* can be accounted for in exclusively naturalistic terms as occurring in response to a series of low probability random 'lucky breaks', or as the result of God's loving providence delivered through these events, and Falk declares belief in *either* possibility to be both rational and based on a faith commitment. That is, the belief that God's hand has been present through the evolutionary process cannot be proved but, in the light of the evidence presented in the previous chapters, it is a reasonable belief.

These chapters chart the emergence of the genus *Homo* in Africa over six million years ago, noting the development of brain size and neuronal connectivity along with evidence of rudimentary social culture; and then the emergence of *Homo sapiens* 300,000 years ago and our remarkable ability to survive, flourish, and populate the world at the expense of other hominids. This survival advantage invites questions from both the scientist and the theologian as to what makes our species so special. Falk answers this in terms of our capacity for social cooperation and expansive social networks underpinned by

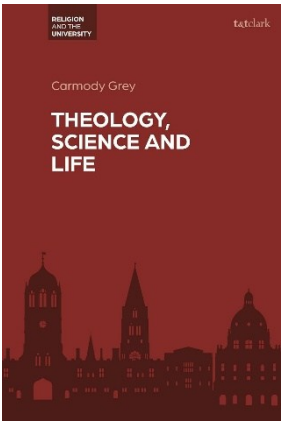
psychological abilities such as joint attention/intention and theory of mind (understanding that others have a mind like mine and putting myself in their shoes). He presents this as the fertile ground from which love of God and love of neighbour might grow. In a fascinating section on prehistoric cave art, he introduces the idea that, alongside social cooperation, developing brain structure and function, enabled *Homo sapiens* to reach beyond itself through imagination and the use of symbol, expressing the capacity for spiritual transcendence, and argues that this is where the human spirit can do direct business with the divine. The ability to imagine makes *Homo sapiens* unique amongst animals in recognising our own mortality, and this drives our unique eternal and existential concerns.

This account is woven together with theological concepts as it goes along, but as the book proceeds these become more prominent, and specific sections are given over to ideas such as creation in the image of God, the nature of divine providence, the Fall, and the nature of human sin. Many interesting points of connection are made, though at times the enterprise of fitting the science and theology discourses together feels overworked and strained. Issues which do not easily fit the book's argument (such as the sheer (apparent) wastefulness and cruelty of the evolutionary process and the fear and hate-based nature of much primitive religion) are minimally addressed or studiously ignored.

But it is not possible to cover everything in such a wide-ranging book and, overall, Falk does an excellent job of presenting much disparate material in a digestible and enjoyable form. The theological offerings invite the reader to pursue her own wondering about and wonder at the created order and the God of love who is its author. More importantly, the wisdom embodied in a Christian who has spent his life pondering these things offers inspiration, hope, and a taste of that time when we shall know fully even as we have been fully known.

Joanna Collicutt, University of Oxford

Carmody Grey
Theology, Science and Life
London: T&T Clark, 2023. 258 pp. hb. £79. ISBN 9780567708489



How should we understand the relationship between theology and science, and how should theology think about science today? For many years, the response of academic theologians to the first question was compartmentalization: theology is like *this*, while science is like *that.* More recently, the response to the second question has been a kind of fearful accommodation, as embodied in the turn to 'science-engaged theology', in which science dictates theology's terms of reference. With her first book, *Theology, Science and Life*, Carmody Grey provides a compelling alternative vision in which biology—modernity's most confident and consequential science—is seen as a kind of theology, and vice versa. She argues that biology's methods and goals exceed secular reason, while theology is a story about life that necessarily infuses every field of understanding. On this account, it is not just theology and biology that defy categorization: organic life—not simply material nor spiritual—is also conceptually elusive. This view, which Grey calls 'theological vitalism', discerns freedom, meaning, and purpose in biological facts, and calls for a reverence of life as a participation in the life of God.

Grey's book is expansive in scope, ambitious in purpose, and highly conversant with both the rich philosophical resources of the Christian tradition and recent developments in biology. Her key interlocuters are John Milbank, whose forceful assertion of theology's mastery laid the groundwork for the Radical Orthodoxy movement, and Hans Jonas, whose philosophical biology rejects a mechanistic view of the world, provides a synthesis of life and mind, and thus offers what Grey sees as an account of life that is replete with theological promise. Grey's

treatment of Jonas in particular illustrates the sensitivity and perceptiveness of her methodology. Rather than seeking crudely to repurpose philosophical or scientific accounts to advance Christian narratives, she carefully draws out their theological implications as part of a deeper thinking of Christian metaphysics.

Grey's argument is provocative in the best sense: it seeks to stimulate new patterns of research and reflection. She correctly observes that the theology and biology dialogue has been preoccupied with narrow concerns about design and evolution. If, as she argues, biology is intrinsically theological and life is ontologically uncontainable, this suggests the need for more robust assessments of biology's worldview and the theological shape of its assumptions, activities, and aspirations. In addition, Grey's outline of theological vitalism can be put to work in the context of environmental ethics, specifically our concern for non-human life. She finds in every form of life—not just human life—the witness to its own source of goodness, value, and being. Theological vitalism might therefore provide fresh inspiration for theology to attend to its lamentable neglect of the lives of plants, animals, and broader ecosystems.

There is an ironic sense in which Grey's argument is so effective that it seems to return us to her starting point. She sets out to demonstrate that theology can recover a sense of itself as an authoritative source, as the science of everything there is. Yet to the extent that her biology-as-theology and theology-as-biology model is true, it negates disciplinary boundaries and therefore any sense of mastery or finality. For this reason, the book's impressive clarity and originality are grounded in humility and provisionality. The task for theology remains to commit itself to interdisciplinary learning so that it might tell the right story about creatures and creation. Grey's achievement is to remind us that this was always its highest authority of all.

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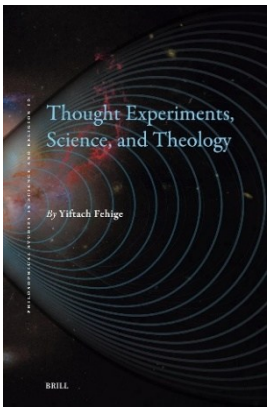
Yiftach Fehige
Thought Experiments, Science, and Theology
Leiden: Brill, 2024. 246 pp. hb. £123.73. ISBN 9789004540330



Yiftach Fehige is a professor of science and religion at the University of Toronto who has given considerable thought to the widespread deployment of thought experiments. Readers will be aware of at least some of these from their own disciplines, but may be surprised at their use in other fields. An important question raised by Fehige is what we learn from these constructs of the human imagination. Science is widely regarded as empirical, and it is experiments in the real world which are supposed to verify our theories. This raises the connection between rationality and empiricism.

In physics a famous example would be the Einstein-Podolsky-Rosen paradox, which imagines measurement of a state at one point instantaneously causing a particular state at a distant point, seemingly violating the speed of light constraint on communication. Interestingly, real-world experiment has verified the phenomenon of quantum non-locality.

A famous example in philosophy of religion is atheist Antony Flew's invisible gardener (based on an earlier version of John Wisdom). Two explorers come across a clearing in the jungle with many flowers and weeds. One postulates a gardener, so they set a watch to see if the gardener comes. The story is elaborated as more detection devices are placed and the believer argues that the gardener is invisible and undetectable by all these means. The sceptic asks what the difference is between the invisible gardener and no gardener. Fehige omits to say that in later life Flew was converted to deism by the teleological argument. He does, however, mention Basil Mitchell's alternative thought experiment concerning a member of the war-time resistance

who in some circumstances will appear, ambiguously, as a supporter of the régime.

Fehige traces the history of thought experiments, and he sees the year 1986 as inaugurating a proliferation of philosophical interest. Particularly notable was the contrast between the view of John D. Norton that thought experiments are nothing but arguments and cannot yield anything more than logic and empirical knowledge permit, and the Platonist account of James R. Brown, that thought experiments enable us to learn things about the physical world without new empirical evidence.

Fehige summarizes the history of modern philosophy of science, referring to significant exemplars such as Paul Feyerabend, Imre Lakatos and Thomas Kuhn, giving most weight to the last of these. He argues that the influence of Kuhn in philosophy of science is important in breaking the rationalist-empiricist dichotomy. This brings Fehige into conflict with the late John Polkinghorne whom he labels a 'scientific monist' whereas Kuhn is pivotal for 'scientific pluralism'. These terms are not entirely unambiguous. Thus 'scientific monism' would seem to indicate the search for the ultimate 'Theory of Everything' which describes all of science, yet, as Fehige admits, Polkinghorne is not a reductionist but an emergentist, so that, for example, biology has its own concepts and understandings which are not reducible to those of physics. However, I agree with Polkinghorne, contra Fehige, that Kuhn's treatment of paradigm shifts, driven by the persuasiveness of the protagonists rather than a normative scientific rationality, and driving a wedge of 'incommensurability' between paradigms, is highly problematic. I much prefer Polkinghorne's view that in science we are attaining 'a tightening grasp of an actual reality' and this explains the success of science. I think what Fehige's analysis shows is that Polkinghorne is not easily categorized. In searching for the best empirically-evidenced theory, he could indeed be classed as a 'monist'. The same would apply to his opting for genuine indeterminism in quantum theory over against the Bohmian deterministic interpretation,

which he sees as contrived. Moreover, he certainly has a place for thought experiments, yet, whilst he is a mathematical Platonist, he cannot be put into either the rationalist or empiricist camp with regard to them.

Fehige classifies Polkinghorne as both a 'scientific monist' and a 'theological monist'. He himself prefers 'scientific pluralism' and 'theological pluralism'. Regarding scientific pluralism he gives the example of many different theories for how sexual selection evolved. In physics one might cite the big bang theory versus the steady state. However, this was resolved by evidence supporting the big bang. At present there are rival theories concerning the early universe, such as string theory and loop quantum gravity. Polkinghorne would wish to see these resolved by evidence in due course; otherwise, we are in the realm of speculation or metaphysics rather than physics. Polkinghorne similarly sees Christian belief as rationally and evidentially grounded, through his 'bottom-up thinking' approach. Fehige, however, insists on the equal status of Rabbinic Judaism and Christianity as revelatory of God. Yet either it is true or false that Jesus is God incarnate. I side with Polkinghorne, Swinburne and others, contra Fehige, in seeing the evidence support the claim that it is true. Yet for Fehige (154), paradoxically, we need to move away from theological monism precisely because it 'valorizes the truth'!

Fehige proposes the division between the Rabbinic schools of Hillel and Shammai as an example of pluralism within Judaism. Hillel took a relatively soft line and Shammai a hard line with reference to Jewish practice, and Fehige illustrates their dual existence with thought experiments. Of course, Christianity is pluralist in the sense that there are different denominations. However, all Christians subscribe to the Nicene Creed, which Polkinghorne as a scientist is evidentially motivated to believe, just as he is motivated to believe his physics.

The book includes an extensive consideration of the book of Job as a thought experiment. A major interlocutor familiar to readers of this journal is the late Tom McLeish. McLeish recognizes the importance of

imagination in science and theology and sees the book of Job as bridging these disciplines. However, like Polkinghorne, he is criticised for 'theological monism'.

The book is heavy-going but worthwhile for those wanting to explore the deeper philosophical implications of thought experiments and the important place they occupy in both science and theology.

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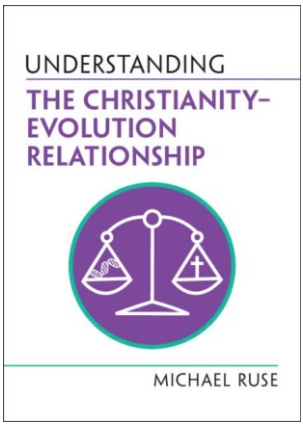
Michael Ruse
Understanding the Christianity-Evolution Relationship
Cambridge: CUP, 2023. 184 pp. pb. £13.99.
ISBN 9781009277280



Michael Ruse is Professor Emeritus at the University of Guelph, Ontario and recently retired as Professor of Philosophy at Florida State University. In his Preface and Epilogue, he makes clear that he writes as a philosopher and historian of science, not a theologian. He does present, and briefly comment on, the views of significant theologians from St Augustine of Hippo to Pope Francis, but there are no in-depth theological discussions. In the Preface Ruse advises readers to begin with the 'Summary of Common Misunderstandings' at the end of the book. He does not discuss these explicitly in the book, but says they were in mind when writing it and readers should be able discern his answers to the problems they pose. A misunderstanding that might be added to those listed is the assumption that the opening chapters of Genesis were meant to be read as an historical and scientific account of creation. His writing is concise, occasionally terse, so that at times the text needs to be read

with careful attention in order to follow the line of thought. There is an element of humour.

Ruse structures the book around two world views, based on different root metaphors. Organicism sees the world in terms of a living organism. It was the dominant view in ancient Greece, adopted by Plato and Aristotle. Mechanism looks at the world as a machine. It was the view of the pre-Socratic atomists. In the first three chapters of the book Ruse seeks to show how these influenced, sometimes in complex ways, the relationship between Christianity and natural philosophy and then science. Initially organicism was seen as congenial to Christianity: the world seen as an organism created by God and in and through which God's purposes are worked out. He sees its presence in the thinking of Augustine, Aquinas and Calvin. With the rise of science, the view of the world as a machine came to the fore. Thinkers from Boyle, Newton, and Paley onwards found ways of relating this to Christian theology. Even after the acceptance of Darwin's mechanistic theory of evolution through natural selection, there were those like Aubrey Moore who were able to do this. Ruse exposes the tendentious nature of the 'warfare' model of the science-religion relationship which arose in the late nineteenth century. He discusses the factors which encouraged the rise of biblical literalism with regard to creation in the southern USA, its promotion by Seventh-day Adventists, and its later adoption by some evangelicals in the mid-twentieth century. There are brief discussions of young-earth creationism, intelligent design, and the debate about the 'fine-tuning' of the universe. Teilhard de Chardin's theologizing of evolution and A. N. Whitehead's 'process theology' are seen as resurgences of organicism in the twentieth century.

Mechanistic Darwinism raises questions about the nature of humans and their place on earth which challenge Christian thinking. The second half of the book is devoted to this. Chapter four discusses attempts to understand human freewill and morality in mechanistic evolutionary terms, and some Christian responses to this. Both secular and Christian

responses to the current environmental crisis are discussed in chapter five. Chapter six discusses understandings of human aggression expressed in war and prejudice (especially racial and sexual). Again, the organising principle is the influence of organic and mechanistic thinking on both secular and Christian thinking. A weakness of the book is that in its use of reference to biblical texts it shows no awareness of the contribution of modern biblical scholarship in dealing with the issues addressed. This is particularly true of how the Bible should be used in developing Christian ethics.

This is not a book of answers, though Ruse's own position on various issues is made apparent. It is a presentation of a new way of looking at the debates that have taken place over the relationship of Darwinian evolution to Christianity in the hope that it will stimulate a fresh way of thinking about the issues involved. It provides a good overview of these debates and deserves to be read and given careful consideration.

The Revd Dr Ernest Lucas, Vice-Principal Emeritus, Bristol Baptist College and Associate Research Fellow, Spurgeon's College, London, has doctorates in both science and theology.

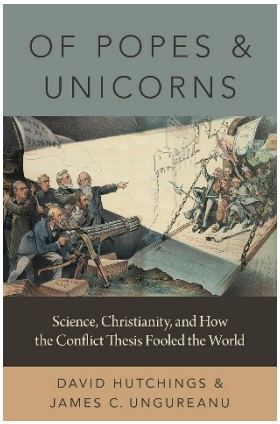
David Hutchings and James C. Ungureanu

Of Popes & Unicorns: Science, Christianity, and How the Conflict Thesis Fooled the World

Oxford and New York: Oxford Uni. Press, 2022. 263 pp. hb. £25.99. ISBN 9780190053093

Enlightened science and dogmatic Christianity, bitter mortal enemies to their cores, are locked in a struggle for allegiance in the hearts and minds of the human race—and forever so shall it be. Or at least that is what John William Draper and Andrew Dickson White wanted us to think when they published *A History of the Conflict Between Religion and Science* (1874) and *A History of the Warfare of Science with Theology in Christendom* (1896) respectively. They spent the rest of their lives preaching this gospel to all who would listen. And it stuck,

or at least they greatly helped what has come to be known as 'the conflict thesis' to prevail in Western culture. It is no accident that the conflict thesis is also known as the 'Draper-White thesis'.



Anyone well versed in the field of science and religion, and even simply the history of science, will be aware that the thesis is pure myth. Yet that has not stopped the overall notion and its supportive sub-myths from having what can appear to be eternal intellectual life, especially among the uninformed.

David Hutchings and James C. Ungureanu have written a completely engaging and delightfully entertaining account of Draper's and White's efforts in *Of Popes & Unicorns.* They incorporate a multitude of related authors, commentators, and relevant contemporary issues up to the present day besides. This is no dry history, should anyone not of an historical bent be concerned. There is lots of welcome humour here alongside contemporary anecdotes seasoning each tale and bringing them right up to date.

The book's nine chapters tell the reader much more about Draper and White, and of the continuing aftermath of their works, than even many field-wise experts will know. I teach science and religion professionally, and was pleased to learn plenty by the authors' extensive attentions to particular focal points. Who knew the extent to which, for example, Draper and White not only were *not* angry atheists—indeed, not even agnostics—but each considered themselves to be Christian disciples who 'were writing, the two of them said, not to push science and religion ever further apart, but instead to bring them both back together' (19). '"My conviction is that Science … will go hand in hand with Religion," White declared in *Warfare*, with Draper noting that the very purpose of his *Conflict* was a call for "a friendship, that misunderstandings have alienated, to be restored"' (19, 20).

Each of Hutchings' and Ungureanu's chapters show in detail how a series of conflict sub-myths encouraged by Draper and White, despite their best intentions, have helped to prevent any such desired reconciliation from happening. The authors explode each myth in turn. We get play-by-play machinations of classic science and religion folklore invigorated by *Warfare* and *Conflict* like that Christianity caused a flat-earth belief to persist until brave Columbus defied Church authorities (chapter 3), of biology and medical science only advancing once free of similar Christian constraints (chapter 4), and of the tragedy that was the medieval Dark Ages (chapter 5), which were in fact anything but Dark, with names like Augustine and Aquinas being among the chief culprits as portrayed by Draper and White. Augustine, for example, despite his vilification, used a kind of scientific method to test ideas centuries before we ever had what we now speak of as 'the scientific method'. Heroes of conflict legends included by each are numerous, and include Hypatia, Bruno, and naturally Galileo. The truth is that no meeting of science and religion has ever been as straightforward as Draper and White present.

The volume's attention-capturing title, *Of Popes & Unicorns*, arises from somewhat lesser-known tales in which belief in nonsensical beasts like unicorns, White claimed, have been encouraged by archbishops and popes. This is not to mention the false story of Pope Calixtus III excommunicating the spectre of Halley's comet in 1456, when with some vigour he "exorcised and expelled it from the skies", Draper recounts (101). This never happened.

The remaining chapters, 6 through 9, are the most philosophically interesting, with a shift towards analysing why persistent science and religion myths occur in the first place, and with the authors moving towards constructive suggestions and positive prognostications.

The volume ends with intimations of those who point to constructive ways forward, even if it appears that 'Draper and White have won the battle for our minds' with scientists finally cautious of religion and the religious of science (218).

While the *field* of science and religion and its good works *per se* is not so much a focus, this would have made for a pertinent entire chapter. Still, many names seen as working within the field are lauded as exemplars, like Margaret Osler, Ronald Numbers, and Peter Harrison. One is told of scientists, too, like Francis Collins, Deborah Haarsma, and David Wilkinson all challenging the conflict thesis. Predictions include the hopeful point that there is no reason why the conflict thesis cannot be completely overturned. Which, in an ironic way, would fulfil the stated wishes of Draper and White.

The greatest strengths of this book are its accessible and entertaining style, and the rich array of information about which even professionals in science and religion might be unaware, making it worthy of both popular and professional digestion. Refreshingly fun and a serious piece of scholarship at once, this book is recommended reading.

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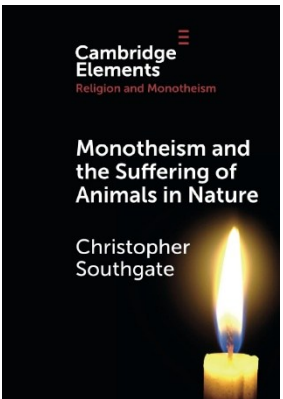
Christopher Southgate
Monotheism and the Suffering of Animals in Nature
Cambridge: Cambridge University Press, 2023. 70 pp. pb £16. ISBN 9781108948685

Despite its title this book is about Christianity and the suffering of animals in nature (1) though some brief remarks are made regarding Judaism and Islam (3-6). In addition, animals = non-human animals, and the focus is on their suffering in nature ('red in tooth and claw') not on that caused by humans. The book packs a lot of information into its 70 pages and is really a comprehensive review of Christian (theological) and philosophical approaches to the problem, though towards the end (55-61) two new speculative proposals are made.

Simply stated the problem for Christians is why would a loving God use evolution to fulfil his purposes, given the species extinction and animal suffering it has entailed over hundreds of millions of years? Southgate reviews the possible responses starting with the neo-Cartesian view

that animals don't really suffer, and progressing through various theodicean views, including his own 'only way' view, to conclude that no single approach provides an adequate response. A combined response (compound theodicy) necessarily requires the inclusion of the co-suffering of God and a post-mortem life for animals (61).



Some of the discussion (30, 33) is based around balancing value (good) against disvalue (evil) in developing a theodicy, but it is less than clear whether this is a judgment that we can make as humans. As Southgate notes (45) 'there must always be a caution about our applying our own (creaturely) morality to the creator of all'. Perhaps we need to take a sceptical theism approach and admit that our ability to understand why God has ordered the world in the way He has is very limited.

An interesting question raised (35, 52) but not really answered (at least not to my satisfaction) is: why didn't God simply create ab initio the new heaven and new Earth, where there will be no more pain and suffering (Rev. 21:1-4), presumably for animals too, assuming their post-mortem existence?

Regarding the two speculative proposals at the end of the book (55-61) the first seems to raise the spectre of a multiverse (56) which has its own problems scientifically and theologically! The second that there is a dark power that opposes God's will in creation (60). Like Southgate I believe in the existence of this evil, not least because Jesus did (e.g. Matt. 6:13, John 17:15). Whether Southgate's speculative proposals help in developing a better theodicy remains to be seen.

For me two critical issues are: a) the need to distinguish between pain and suffering, which Southgate does to a degree (8); and b) how to identify suffering in animals (not considered). With regard to a) there

does not seem to be an accepted definition of animal suffering, which makes discussion of the topic somewhat problematic. Regarding b) I am always surprised how writers on this topic rarely make mention of the work of Dawkins (Marian Stamp not Richard), such as *Why Animals Matter* (2012, OUP) where this issue is approached from a scientific standpoint. She makes the point that we approach suffering in animals often through a 'leap of analogy' with our human experiences. Identifying pain in animals is more straightforward scientifically than identifying suffering (see Srokosz & Kolstoe, 2016, Science & Christian Belief, 28:3-19). It is unclear whether science will ever allow us to examine an animal's experience and know definitively what suffering they are experiencing (we can't even do this with another human being). Nevertheless, we feel intuitively that animals do suffer, and this requires us to grapple with the questions raised in this book.

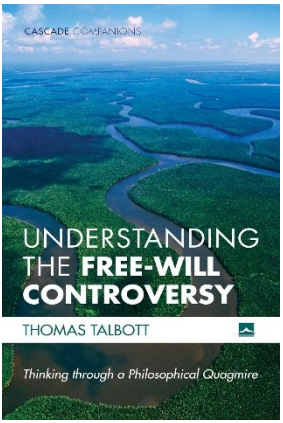
Would I recommend the book? I enjoyed reading it, so yes. It provides a very good introduction to the suffering of animals in nature and Christian attempts to explain how that can be compatible with the loving, sovereign God revealed in the Scriptures, and especially through Jesus, God incarnate.

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

Thomas Talbott
Understanding the Free-Will Controversy
Eugene, Oregon: Cascade Books, 2022. 131pp. pb £14.27. ISBN 9781725268364

In this short introductory book on the problem of free will, Thomas Talbott, an American philosopher, engages with a philosophical problem that has often proved intractable. How far are we responsible for our actions, and how far is everything we do determined by factors outside our control, and of which we may be unaware? This issue has

become particularly salient at the meeting point of science and religion. Theology has traditionally championed the idea that we are responsible for our actions and answerable to God for them. If we are all puppets on a string, whatever the string, we cannot be blamed for what we do. This is also a major problem for morality in society, because it raises the question how far criminals are responsible for their actions.



Contemporary science raises challenges to traditional ideas of human freedom. The twin influences of heredity and environment loom large for any study of human behaviour. Biologists look at the interaction of genes and environment. Neuroscientists look at the role of the brain. The onward march of artificial intelligence poses the question of whether machines could have the same freedom as humans or demonstrate by their own abilities that human freedom is itself an illusion. From another direction, contemporary social theory, influenced by such masters of suspicion as Marx, Nietzsche and Freud, suggests that our apparent rationality consists of rationalisations produced by our social or psychological background. Yet at the same time, quantum mechanics opens the possibility that the physical world may not be a closed determinist system.

This book never confronts any of these crucial issues and does not envisage that scientific questions are relevant. The book could have been written sixty or more years ago. The chapter on 'The Temptations of Fatalism' is a case in point. The idea that if it is true now that something is going to happen, therefore it must happen, and we cannot prevent it, may be a perennial logical puzzle arising from issues about truth. It hardly helps us in the present age to understand the possible autonomy of human beings.

What is at stake is human rationality. Can we reason freely about what is true, or are we governed by prior causes determining what we count

as rational and true? Freedom and rationality seem to have to go together. Talbott, however, ducks this basic question, by putting aside (71) 'the issue of whether human rationality would be possible in a self-contained and fully deterministic universe.'. For him, the essence of freedom is the ability 'to follow the dictates of one's own reasoning power'. The haunting question must remain whether such reasoning is mere rationalisation in the grip of causes beyond our control. Talbott never confronts this and gives more credence than is justified to the idea that uncaused behaviour must be random or arbitrary. That has been a favourite position of so-called compatibilists, who suggest that human freedom and determinism could go together.

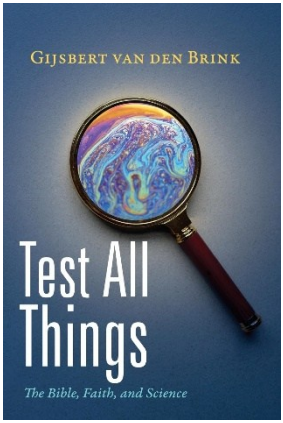
Talbott's theological stance is itself hardly uncontroversial. He is a defender of theological universalism, the view that under God's providential control, we will all eventually be guided to the same 'glorious end' (120). Our free choices would reveal the horror of separation from God, so that all paths finally lead to reconciliation (116) . Where this leaves questions of moral responsibility, personal accountability or divine judgement, is not explored. The combination of pedestrian philosophy and idiosyncratic theology fails to cast much light on an issue that deserves serious thought in contemporary discussions about science and religion.

Roger Trigg is Emeritus Professor of Philosophy at the University of Warwick: his latest book is Faith: A Very Short Introduction, Oxford University Press, 2024.

Gijsbert van den Brink
Test All Things: The Bible, Faith, and Science
Eugene OR: Cascade Books, 2023. 126 pp. pb £14. ISBN 9781666761566

Van den Brink aims to show a Christian can accept both the teaching of the Bible and the discoveries of science. He does this, not by trying to show that the two sources contain propositions that agree, but by pointing out the different ways in which they convey information. On

the one hand, the Bible has to be read in its historical context, so we have to be aware that its language does not always convey literal events. On the other hand, our acceptance of scientific discoveries shouldn't become a faith in itself (what he calls scientism), so miracles cannot be dismissed as impossible.



The book is designed to be used for a Bible Study group, but I'd suggest that a wise group leader would consider omitting chapters 1 & 10 and possibly 2 & 9 because these cover things said elsewhere.

He sometimes takes careful note of what the text says, and sometimes he is too dismissive. For example, he points out the indications that other humans lived in the time of Adam because Cain was afraid to meet them, and later built a city for them. But he says Genesis 2.19 teaches that "the Lord made" animals after humans by dismissing the translation "the Lord had made". Hebrew often relies on context to indicate a pluperfect meaning. For example, the same Hebrew grammar occurs where we should translate "the Lord had said" as demanded by the context at Gen.12:1 and Exo.33:5.

He does not try to make scripture cohere with science. Sometimes, as with the seven days, he reads scripture as an illustrative story, and sometimes, as with Joshua's long day, he says that science can't conclude that miracles don't happen. This apparently laissez-faire approach has a purpose: his main aim is to point out the unnecessary conflicts caused by unacknowledged assumptions.

Readers of scripture often assume their modern mindset is the same as that of the author and original audience. He points out the contrast between Genesis and the ancient Near Eastern myths concerning gods identified with planets and bodies such as the sea, who bicker amongst themselves and treat humans contemptuously. Phrases such as "the

sun rose" referred to its literal movement in those days – but that doesn't mean we should regard this meaning as God's teaching about the nature of creation.

Others may come to rely on science as if it is a religion, expecting it to answer every problem. This scientism is based on a misunderstanding of the scientific process and the limitations concerning what can be investigated. The Bible's concept of wisdom extends to human relationships and a relationship with God that is beyond the scientific purview.

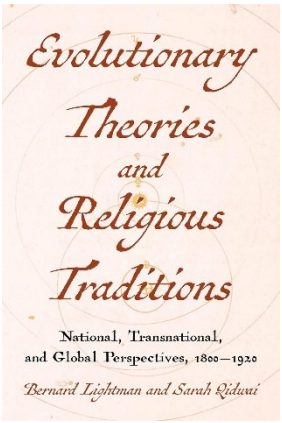
Chapter 6 and 7 on death and resurrection stand out for the way they grapple with scripture in the light of science. The concept of a universal fall is teased out and examined. Why do we assume there was no animal death before Adam's sin, when Paul's topic is mankind? How could creation work without a life and death cycle? And how can eternal life be envisioned in the light of a cooling and aging universe that appears destined to have an end? These chapters will certainly get the group discussion going, though they will require a leader who has grappled with the topics beforehand.

Rev Dr David Instone-Brewer – a retired Biblical Studies academic, with a background in medical sciences.

Bernard Lightman and Sarah Qidwai (eds)
Evolutionary Theories and Religious Traditions: National, Transnational, and Global Perspectives, 1800-1920
Pittsburgh, PA: U. of Pittsburgh Press, 2023. 390 pp. hb. £56.00. ISBN 9780822947929

There is no global history of science and religion, and this book serves to show why not. One might expect that a book about evolution and religion in the nineteenth century would have a fairly predictable structure, showing how Darwin's theory was received by representatives of various faiths with chapter headings such as 'Islam and Evolution' and 'Buddhism and Evolution'. There is something of that here, but most of the contributors have ranged much more widely.

For a start, 'evolution' encompasses not just western biological evolution, but also cosmic and astral evolution as imagined by Chinese or Indian thinkers. The global perspective encompasses people outside the West as well as debates internal to American and European society. The result is a collection that contains interesting work but does not really hang together as a coherent whole. Indeed, in their introduction, the editors discuss the difficulty they had organising the submissions they had received.



It isn't possible to comment on all the contributions in a short review but the following should give an indication of the variety of fare available in this smorgasbord of a book. In his chapter, Simon Schaffer describes disputes in the Calcutta Asiatic Society and other settings over the dating of Sanskrit astronomical texts. Your reviewer enjoys an academic spat as much as anyone else, but given the current volume is supposed to consider global perspectives, it is disappointing that the Indians themselves hardly get a look in. After all, the debate between the Vedic traditions of the Brahmins and mathematical astronomy, probably introduced to India from Roman Egypt by the fifth century, has been ongoing for fifteen centuries. Schaffer's emphasis on Europeans, some of whom thought that Sanskrit astronomical texts were quite recent while others insisted, they were extremely ancient, seems unnecessarily narrow in scope. That said, the European end of the argument over dating, not to mention the Hindu one, is still ongoing to this day.

Tamara Fernando and Sarah Qidwai focus their attention on people from India and Ceylon. This is a more satisfying chapter that emphasises the particular religious responses to evolution by representatives of Islam and Buddhism. Meira Gold takes us to nineteenth century Egypt, officially part of the Ottoman Empire but heavily influenced by the French and British. The locals consequently

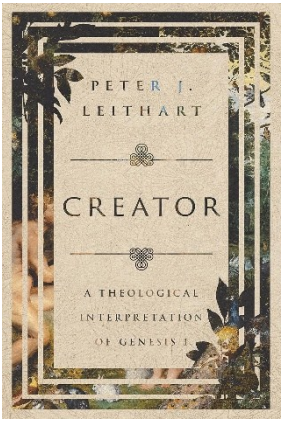
found it hard to decide who they should resent the most. The chapter focuses on Joseph Hekekyan (1807 - 75), an Armenian Ottoman civil servant who sought to contribute to Egyptology by combining European scholarship with biblical chronology and his own experience of archaeology. His efforts were met with considerable condescension from the few British readers who came across them.

Fa-ti Fan and Bernard Lightman consider how evolutionary ideas spread in Japan and China, not from translations of Darwin himself but via works derived from Herbert Spenser (1820 - 1903) and Thomas Huxley (1825 - 95). One of the common themes of the book is the way that non-western thinkers would develop ideas that were downstream from Darwinism itself, perhaps finding such speculations easier to mould to their own traditions than the materialist theory of natural selection. Wan Zhaoyuan looks specifically at the case of Kang Youwei (1858 - 1927), who encountered evolution in the work of Robert Chambers (1802 - 71). Kang sought to integrate Confucianism with western science in order to help the Chinese (he thought in explicitly racial terms) to avoid conquest or partition by European imperialists.

In their conclusion, the editors approvingly note Ron Numbers contention that the demise of the conflict and harmony paradigms in the historiography of science, and their replacement by the complexity thesis, has proven unsatisfying. They see Peter Harrison's Territories of Science and Religion, referenced by several other contributors to this volume, as a possible model for alternative 'big pictures' and suggest the transnational perspective as a useful tool to get there. However, on the basis of the book under review, we have a very long way to go before we can expect to see any overarching framework to explain the relationship between the many different kinds of science and the even more multifarious religious traditions found in the world. For the moment, we will have to make do with studies of particularities such as those featured in this volume.

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

Peter J. Leithart
Creator: A Theological Interpretation of Genesis 1
Downer's Grove, Il: IVP, 2023. 340 + xiv pp. pb. £26. ISBN 9781514002162



In its author's own words, '*Creator* is largely a theological commentary on portions of Genesis 1:1 – 2:3, an attempt to articulate a fundamental theology explicitly and rigorously controlled by the Bible's first chapter' (1). The book begins with a methodological introduction, outlining the author's position ('I believe the Bible is a single book and that we can only plumb the depths of its first chapter if we see it through the prism of every other chapter', 26). Successive sections then deal with the creation stories found in Plato and his successors, and the applicability (or otherwise) of the notion of 'simplicity' found in those stories to the Judaeo-Christian God. The opening of Genesis is seen to bear witness to a specifically Trinitarian God: Leithart notes the plural form of *'elohim* in Genesis 1 and the mention of the Spirit in that chapter, and he conflates the speech of God with the Johannine *logos* (and also with YHWH: 'YHWH is, in brief, the name of the Second Person of the Trinity', 232). The numerological analysis that allows Leithart to infer the presence of YHWH in Genesis 1 (223-226) strikes this reviewer as simply bizarre, although one better versed in Hebrew than I might perhaps find more in it. The book ends with some thoughtful reflections on the concept of time, offering a critique of St Augustine on this topic. The message of the book may be summed up by Leithart's reiterated claim, that 'Starting with the Creator offers the only path towards a coherent theology' (156).

Leithart's approach frequently seems to steer his arguments towards pre-ordained conclusions. He describes his position on questions like 'the days of creation, the age of the earth, the whole tangled knot of creation-evolution' as 'fundamentalist' (x); however, this seldom

intrudes into his account (although he does argue that the divine command 'Let there be light' is 'an actual utterance', creating 'a medium for sound' (196), and he asks, 'Does *YHWH 'elohim* actually, physically, plant trees? … Why not?' (240)). Leithart deals at length with a number of theological interlocutors, notably Thomas Aquinas and Sergei Bulgakov as well as Augustine, finding himself agreeing with some parts of what they say and disagreeing with others: at times it is difficult to see the grounds for these judgments – for example, in his rejection of the 'speculative sophiology' of Bulgakov (148), when Bulgakov's approach might surely claim to be precisely a way of reading Genesis 1 'through the prism of every other chapter' of the Bible.

Leithart's own approach comes across as one which sees the Bible as hermetically sealed and admitting a very limited number of interpretative perspectives other than his own. From the viewpoint of readers of this journal, this inevitably leads to a disappointing lack of engagement with science. John Polkinghorne is briefly mentioned (16-17), and dismissed for his 'accommodation' of the Bible to modern ideas. Thomas Torrance is alluded to without comment (122). It is pointed out that science rests on unprovable premisses (2-3), but this is hardly a novel insight. It is asserted that 'Science's hostility to anthropomorphism is one source of our deep alienation from creation and from ourselves' (15 n. 31), an idea which is plausible but requires more elaboration than it receives here; and we are told that 'Poetry is the human "genre" that best matches the sort of world we live in, and science does best when it becomes like poetry' (246). How it might do that, and by what criteria science might be said to be 'like poetry', are questions left unexplored.

Those sharing Leithart's theological perspectives may perhaps find things to enjoy in *Creator.* I suspect, though, that it will have a limited wider readership.

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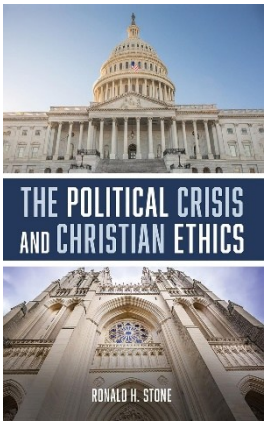
Ronald H. Stone
The Political Crisis and Christian Ethics
Eugene OR: Cascade Books, 2023. 276 pp. £23. ISBN 9781666746235



The role of religion in contemporary politics in the United States is much in focus. It is unnecessary to rehearse well documented causes and effects of evangelical-Republican alignment, or the souring of American politics through the forces of populism and polarization, inflected with religious social conservatism. Yet older traditions of Christian political thought and practice are receding from view. It is from these that Ronald H. Stone seeks to speak into the current political moment.

Stone, the Emeritus Professor of Christian Ethics at Pittsburgh Theological Seminary, is a scholar of Reinhold Niebuhr and Paul Tillich. The former is known primarily – via Moral Man and Immoral Society (1932) – as a political realist, though he is known to have rejected this description. The latter articulated an existentialist Christianity and was a strong advocate of Christian socialism from his time in Weimar Germany and onwards. In this volume Stone assesses their contribution to US politics. Additional material speaks to the work of various other thinkers (e.g., H. Richard Niebuhr, Alfred North Whitehead) and religious politicians (e.g., John Foster Dulles, Barak Obama).

The title of the book suggests a focus on the travails of American democracy in the run-up and aftermath of the 2024 Presidential Election. In fact, it is an anthology of essays written at various points during the author's career, albeit now revised. There is some more recent material (a long chapter on the Social Priorities of Prophetic Realism 161-209). Stone makes some efforts to tie these older contributions to the present moment, though not consistently. It is

primarily a book of religious political ethics, and will be of less interest to those interested in a more explicitly theological exploration.

The central argument, such as it exists in a diverse collection of texts and themes, is that religion matters in US politics, but not in the ways that it is now thought to matter. Stone sets out how Reinhold Niebuhr in particular shaped political thinking in the postwar period, and indeed on into the 21st century. Rev Dr Martin Luther King Jr was attracted to Niebuhr's work. Barack Obama said that that Niebuhr was his favourite philosopher. This Niebuhrian realism – which Stone calls prophetic realism to retrieve this tradition from the impression of mere realpolitik – was Augustinian and Reformed in nature. Human communities are sinful things, places of mixed desires and moral compromise. Idealism should therefore be resisted. Political orders could and should be oriented toward justice, and good could be achieved. Applied to the international arena, for instance, this would require that the United States exercise its power – including through military means – in the name of a just cause. Yet he was not naïve to the possibility that the US should act unjustly. Niebuhr was, for instance, a critic of the Vietnam war.

Niebuhr and Tillich, for Stone, are representative of a tradition of intellectually serious and authentically Christian engagement in America's public life, broadly 'liberal' both politically and theologically. It is a tradition that is now very much overshadowed by evangelical populism. At times, this book has an element of memoir, helpfully grounded in civic action as well as in academic work, but it has a tragic tone – fittingly Niebuhrian. The assault on the Capitol in January 2021, for Stone, manifests a fundamental weakness in America's politics. Early in this book, he acknowledges that he is contributing from a 'sidelined church' and, by extension, now sidelined theological perspectives.

I would have liked Stone to have presented a more sustained theological argument, bringing together the reflections of his long career, and making the case again for prophetic realism, as against the romantic nationalism which represents a grave threat to American

democracy, and perhaps engaging with critics of the Niebuhr tradition, who indeed find it insufficiently theological. If such a case is not made urgently and clearly, then this tradition will be lost. If Barak Obama was not the first President to have been influenced by Niebuhr, it is surely likely he will be the last.

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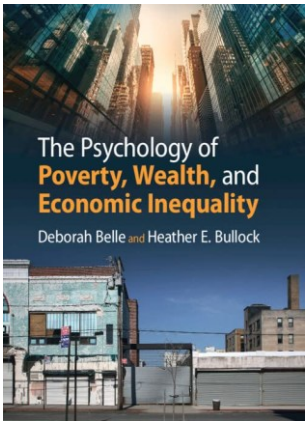
D. Belle and H. Bullock
The Psychology of Poverty, Wealth, and Economic Inequality
Cambridge: CUP 2023, 414pp, pb £35.87. ISBN 9781108731829



In this book psychologists Deborah Belle and Heather Bullock have offered a valuable and distinctive contribution to the academic study of economic inequality and its consequences for wellbeing. Crucially, it is not limited to the well-studied effects of poverty on human behaviour and psychological development, but comprehensively explores the intersection of wealth, poverty and inequality and the ways these impact on health outcomes and development.

It combines empirical evidence with a thorough review of existing academic literature and multiple theoretical frameworks for understanding socioeconomic status. It is firmly interdisciplinary in approach, drawing on psychology, sociology and economics as well as wider social scientific study. The authors synthesise a huge range of studies from various disciplines in order to explain and explore the intersection of economic trends. They astutely tackle a wide range of topics including race, gender, housing and homelessness, parenting, mental health, social class, gentrification and economic justice, with

assiduous detail and in a way that is accessible for undergraduate level students.

Written as a study book, the exercises and questions for students are particularly well-considered, encouraging self-reflection as well as academic interrogation of the concepts studied. The chapter on parenting, for example, asks students to consider their own upbringing and how they anticipate raising their own children if they plan to have them, alongside comprehension questions about the social networks of low-income families. This approach is helpful in guiding students towards reflective practice drawing on their own lives, as well as grounding the evidence in practical solutions and real-life experiences.

Published in 2022, it touches on the disparate impacts and experiences of the Covid-19 pandemic according to class and status. However, there is much more that could be said about this, which would merit a whole chapter in future revised editions. Similarly, it is predominantly focussed on the US perspective, although cross-country comparisons are frequently drawn on. Both, the policy context and the understanding of concepts like race and social class, are clearly influenced by the US experience. This should be born in mind if used in studying inequality and poverty elsewhere, although the thoroughness of the evidence base suggests it would not be less valuable for this.

The academic study of economic inequality is no longer the preserve of a niche group of social scientists, but an interdisciplinary paradigm of growing importance. Belle and Bullock's textbook successfully integrates this with the psychological study of wealth and poverty, which intersect in complex ways, and is an excellent contribution to this field.

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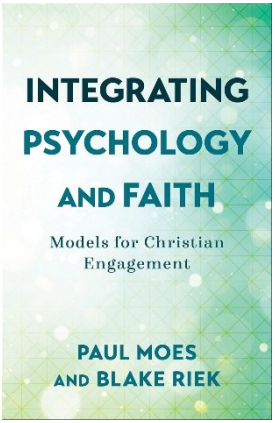
Paul Moes & Blake Riek
Integrating Psychology and Faith: Models for Christian Engagement
Grand Rapids, MI: Baker Academic, 2023. 192 pp. pb. £14.93. ISBN 9781540964755



It would be easy to criticise a book like this: to point out various errors and omissions and oversimplifications. Analytic philosophers might take issue with the definition of "supervenience" offered (21), which via etymology confuses it with top-down or downward causation. Aristotelians might wonder where hylomorphism fits into the three ontological options on the menu (19). Free will compatibilists might flinch whenever determinism and free-will scepticism are tied together (e.g., 23-24). Such examples could be multiplied further, but to do so would be to misunderstand the book and underestimate its value. To get that right, we have to consider the book from the perspective of its target audience.

Once upon a time–much longer ago than I care to consider–I would have been the paradigmatic reader for this book, as described in the preface: "a student who is devoutly religious and wants to study psychology" (xi), and I was, as the authors predict, warned by some friends and mentors to be careful about the perceived conflicts between modern psychological science and Christian faith. Fortunately, I found the work of people like Malcolm Jeeves–one of Moes's own influences too–helpful in my own thinking about the questions covered in this book. Had *Integrating Psychology and Faith* been available twenty years ago, however, I would have saved a lot of time and no little anguish. The issues Moes and Riek lay out so neatly and concisely–about the ontology of the human person, the metaphysics of human agency, our moral status, and so forth–were precisely the kinds

of issues that occupied my mind. Although I do not regret the hours spent reading voluminously on these distinct issues, a book like this one would have been a convenient and helpful starting point. Introspectively and anecdotally, then, Moes and Riek have identified a real need in the market of books about psychology and religion, and filled it quite adequately.

It is tempting to read *Integrating Psychology and Faith* as a sort of choose-your-own-adventure book, choosing between the various options Moes and Riek describe for any given question, and seeing where that takes us. I cannot quite decide whether it is fair to criticise the book for not leaning into this tendency more, to provide the reader with an introspective or self-diagnostic tool. On one hand, this does seem to be part of the purpose of the book, to help students find their own place in the various ideological continua. This is especially so when one considers the Questions for Discussion at the end of each chapter, which could equally be labelled Questions for Introspection for those reading the book alone. On the other hand, to do so might require a significant expansion of the book, especially if specific theoretical and empirical examples are used for this purpose. It may well be useful for Moes and Riek to guide readers step-by-step through potentially controversial content they might encounter in a psychology undergraduate course, like evolutionary theories about religion and morality (79-81) or Benjamin Libet's experiments on the neuroscience of free will, but that would make for a much larger book, and the concision of the present volume has its obvious merits.

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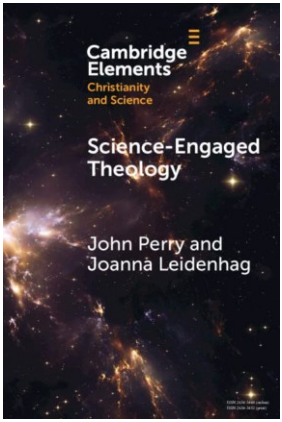
John Perry and Joanna Leidenhag
Science-Engaged Theology
Cambridge: CUP, 2023, 79 pp. pb. £17.00. e-bk. open access. ISBN 9781009094054



Science-Engaged Theology is a book within the 'Christianity and Science' series of Cambridge Elements. Comprising original, concise, and peer-reviewed scholarly and scientific research, the Cambridge Elements are organized into various focused series, edited by leading scholars. In this academic publication, intended for theologians, Perry and Leidenhag delve into the distinctiveness of science-engaged theology compared to prior trends in the science-and-religion domain. They examine its implications for the status of theology in contemporary research universities and provide guidelines for theologians seeking to incorporate empirical studies as a valuable resource in their work.

The work is divided into six sections. Section 1 is an introduction promoting *memento naturam* ('remember nature') and includes three initial reactions to science-engaged theology. A foundational insight is due to human fallibility; the benefit of being exposed to multiple sources of correction, including empirical inquiry, is an epistemic virtue (4). A worthy definition: 'science-engaged theology is a [mindset, (not a method or how science and religion relate),] for theologians to modestly use the best available tools when making empirical claims, alongside (and not in competition with) all the other sources and tools that a theologian uses to know God and all things in relation to God' (7).

In Sections 2-4 Perry and Leidenhag provide a comprehensive and enlightening exploration of the historical and contextual factors that paved the way for science-engaged theology. Since Barbour's fourfold typology the quest for the perfect typology has long dominated the field of science and religion (14). The authors note that while creating

more choices is useful, it can simultaneously limit possibilities by providing pre-set options (15).

Section 5 is on science-engaged theology. The authors 'preferred answer to the question of where science fits among the sources [Scripture, tradition, experience, reason] is to say that sometimes it is helpful to view the sciences as an extension of one particular source, sometimes as implicated in all four Wesleyan sources, and sometimes as something a bit different from any' (51). I believe it pertinent that Perry and Leidenhag emphasized that a single empirical study, or even multiple, contemporary empirical studies, does not suffice to completely discard longstanding theological doctrines. The process of refining theological concepts through empirical scrutiny requires careful consideration and should not be rushed (57). A conclusion at the end of this section is that 'the sciences aid theologians in hearing God's voice in the world by training them in virtues like empirical accountability' (62). Section 6 offers advice for individuals aspiring to become science-engaged theologians. A valuable insight expresses that the best examples of science-engaged theology do not just ask, 'How do x doctrine and y scientific theory relate?', but rather ask: 'How does y finding shed new light, or correct a distortion, or corroborate a position in x theology?' (63).

In the context of this book, I believe it would have been valuable to highlight that according to Protestant creeds and confessions, Scripture is deemed sufficient for salvation, negating the necessity for external knowledge in matters essential for salvation. Also, despite the presence of an Appendix containing references to examples of science-engaged theology (68), understanding certain aspects of this field proved challenging at times without concrete illustrations. For instance, what does the process of creating and collaborating in pidgin languages entail? Occasional clarity issues may arise.

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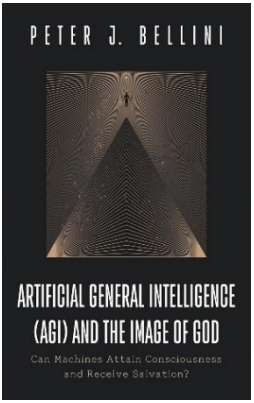
Peter J. Bellini
Artificial General Intelligence (AGI) and the Image of God: Can Machines Attain Consciousness and Receive Salvation?
Eugene: Wipf & Stock, 2023. xxi + 178 pp. pb. £18.00. ISBN 9781666789348



Given where we are at presently with our knowledge of consciousness, including what Bellini calls, following discussions in the philosophy of mind, the 'hard problem' that currently lacks explication of how first person experience relates to our biology and neurology, I am sympathetic to his conclusions that, in response to the question/s in the subtitle of his recent book, no, machines cannot attain consciousness so defined, and, therefore, cannot be saved (nor, then, can or should machines be evangelized, baptized, etc.). To be sure, Bellini grants that artificial intelligence will continue to be developed; yet he is quite sure that there is a chasm between machine intelligence and human consciousness, particularly since it is not the former but the latter that derives from being created in the image of God (thus the book's main title).

While Bellini acknowledges that scriptural data is underdetermined vis-a-vis the various models or accounts – philosophically, scientifically, and anthropologically – of how human consciousness is related to human bodies, his focus only on major philosophers of mind who are either naturalists or non-theistic in their argumentation, leaves much to be desired in relationship to the theological conclusions he argues for. For instance, while I can respect his spirit-matter dualism, his saying 'I find it difficult to be a physicalist of any stripe' (149) rings hollow when he neglects engaging with philosophers, neuroscientists, theologians, and even biblical scholars who are Christians that argue for some kind of emergentist and nonreductive physicalist understanding of consciousness. Some of these – e.g., Nancy Murphy, Warren Brown, Malcolm Jeeves, Joel Green – he mentions and even cites in his book, but does not take time to explore their positions vis-a-vis the questions

he is considering. It might well be that most of these would agree with Bellini that the 'hard problem' of consciousness remains; however, I am quite sure that emergentists and non-reductive physicalists believe theirs holds forth the most promise for an ongoing research program which will continue to shed light on human consciousness and transform the nature of the 'hard problem' whether or not it ever gets resolved.

At the end of his introductory frontmatter, Bellini writes: 'My life project is, through interdisciplinary research in theology, philosophy, and the sciences, to substantiate the claim that "spirit" is a real, valid category for classifying intangible properties belonging to world and person that exceed physical limits or any physical horizon that intends to capture, conceptualize, and computer it' (xxi). It is too bad, then, that he did not dialogue with other Christian thinkers who are also interested in and exploring the reality of 'spirit' in ways that are not totalizing but also not only dualistically construed in relationship to the world in all its complexity, including its material parts. In fact, I wonder if Bellini's own self-designated 'dual aspect (matter-spirit)' conceptualization (149n8) is as far as he seems to insist it is from the emergentism and non-reductive physicalism that he himself categorizes under 'property dualism'? If so, then Bellini might still wish to argue for a more 'substance dualist' approach, albeit one that is open to an ongoing exploration of consciousness with others with theistic commitments. The gap between consciousness and artificial general intelligence might still never be fully closed, although how we understand the chasm might change. And as that happens, Bellini's exploration of what it means for machines to be created in our human image, which he very nicely lays out in the last chapter of his book, will need to be updated too; but that is of the nature of theological engagement with a technological reality that is still in its very early stages of development.

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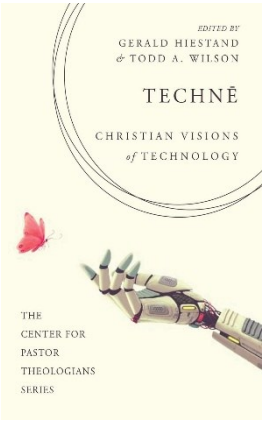
Gerald Hiestand & Todd A. Wilson (Editors)
Techne: Christian Visions of Technology
Eugene OR: Cascade Books, 2022. 239 pp. pb £23. ISBN 9781666704211



The first chapters of Genesis introduce a beginning that starts with logos – word / logic – and says this foundational feature is God. Soon in the narrative come humans, uniquely made in God's image. Such *imago Dei* is the origin of humanity's ingenuity, and also of our responsibility. Our extensive cortex lets us think, reason, remember and worship and our opposed thumbs equip us as tool makers – builders of technology.

Genesis 2 asks humanity to *abad* and *shama* the garden – to work / serve / worship within God's creation and to keep or guard it from mis-use. So, the question has floated ever since – are humans using our God-inspired capabilities within this wise framework? And in '*Techne – Christian visions of technology*', 14 authors set out to explore where humanity has travelled in it desire to use these God-inspired abilities. Their contributions to the collection come from the 2019 Annual Theology Conference of the Center for Pastor Theologians.

The general tone is anxious about where science and technology are taking us, with fear that Google, social media and obsessive use of mobile phones are changing our interactions with each other. Chapter 4 starts with a quote "Therefore, the danger unquestionably arises that modern technology will make men soulless". Another author points to Augustine's anxiety expressed in book ten of 'Confessions' (94) that human-generated fashion, art and crafts 'entrap the eyes...' with the consequence that people 'inwardly abandon God... destroying what they were created to be'. Another asks, 'Is Google making us stupid?' (17)

Another author however celebrates our ability to create tools, pointing our being spiritual, but also that we are made from the dust of the earth and exercise our dominion through the creation of tools: 'To be *homo faber* is to need tools to be functional in the world. It is no different to spiritual realities' (87).

While one chapter looks at AI, one at gene editing and another at embryonic development, the vast majority concentrate on theological and philosophical discussions of the subject, limiting most of the scope to an exploration of hand-held devices.

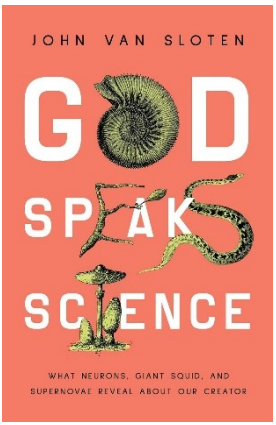
While members of Christians in Science are broadly excited about the opportunities that technology brings, this book presents a fascinating insight into the way technology is viewed by many across the pond. It isn't a light read, with some heavy pieces of reading, but it is important to encounter the tone of fear rising from influential evangelical theological voices.

This left me thinking: is a space for another book where each chapter invites a scientist to explore their growing wonder of God's creation that comes from their techne enabled exploration, and the celebrate the enormous value that has come from the outcome of their labour?

Surely, our God-given challenge is to ensure that our God-inspired use of techne leads us to experience immense wonder in our science, think carefully about its application, and encourage all to build ploughshares and banish swords.

Pete Moore PhD used the tools of neurophysiology to explore how a fetus gets ready to take its first breath of air within seconds of being born – and then continues breathing for multiple decades. He migrated to Science Journalism, wrote multiple books, runs courses in writing and is a Licensed Lay Reader in the Church of England.

John Van Sloten
God Speaks Science
Chicago: Moody Publishers, 2023. 209 pp. £11.99. ISBN 9780802430946



Van Sloten mixes celebrating creation with contributions from scientists reflecting on God's work in their vocations. They invite the scientist to proactively become a seeker of God in the practical.

A pastor, writing primarily to non-scientists, his description of a Christian scientific process may seem odd (30-31) but his reminder is noble that 'When scientists attend to creation, they're listening to how Christ thinks.' (35)

He routinely switches theological positions between mysticism and evidentialism, taking pause on the meaning of a discovery before reverting to drawing conclusions of Christ's literal working in matter. Statements such as 'Radiation therapy images God' (32) are ambiguous, whereas 'God embedded a piece of the mystery of the divine nature into the giant squid's nature' (79) can mystify. Perhaps value is in his challenge: what do we make of God's role in material processes? Is there science in scripture elaborating on scientific practice? Van Sloten boldly advances that 'When science makes more out of physical matter – for example, in a chemistry lab – it carries on an ancient tradition and lays the groundwork for an eternally new future. When those who work in science contribute to the making-more process, they participate in God's cosmic plan for the universe.' (47) Many will see here an overstep for both theology and science. His apocalyptic interpretation that 'Even as the early creation elements of hydrogen, helium, and lithium have continued to this very day, they'll continue for all eternity in some new and glorified form' (48-49) is more than physical process or analogy, but Christ's plan of renewal at work in creation (49). Therefore, DNA repair is also a literal work of

Christ in our bodies each day (138-140). There is power in analogy, but is it literal?

Van Sloten advocates for more wonder in church, and science as a vehicle for this (141-142) and continually celebrates science's potential for holy awe which is praiseworthy.

Sam McKee is a lecturer in philosophy of science at Manchester Metropolitan University and a molecular biology researcher.

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.

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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.

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