

two photos, including Smith's Columbia-University-commissioned portrait. Smith's excerpted writing occupies only 109 of the total 167 pages, nearly two dozen of which are less than half full. The amply spaced text appears on 3.25 inches of the 7 inch-wide pages, the outer margins being reserved for Abbey's own auxiliary notes explaining references and allusions that appear in the excerpt. This gives the book lots of white space; in fact, eighteen pages of the booklet are completely blank. Another nine pages contain 75 short biographical sketches of mathematicians taken from Smith's historical writings; these are unlinked to any of the excerpts, but they do indicate the breadth of his historical interests. Unfortunately, no index of names or subjects is provided for the reader who wants to learn whether a person or a topic is treated anywhere in the booklet; the best one can do in this regard is consult the titles Abbey assigns the excerpts in the Table of Contents.

The booklet gives a gentle introduction to Smith's views on mathematics, mathematics education, and the history of mathematics. The excerpts chosen are more often literary than discursive. Smith was a good writer, able to keep the reader's attention and convey the sentiments intended, but these excerpts do not develop his ideas in any real length. They portray mathematics in radiant—sometimes fanciful—terms that a person disposed toward the humanities might find attractive but nevertheless judge a bit over-the-top: mathematicians are priests lighting candles in the chapel of Pythagoras; mathematics is “the poetry of the mind”; learning geometry is like climbing a tall mountain to admire the grandeur of the panoramic view; progress in mathematics hangs lanterns of light on major thoroughfares of civilization; and retirement is journeying through the desert to a restful oasis “in the shadow of the palms.” Some passages are parables presented to help the reader appreciate what mathematicians accomplished as they overcame great obstacles.

While the excerpts occasionally recognize that mathematics touches everyday needs and is a necessary universal language for commerce and science, without which our world would be unrecognizable, their main emphasis—in line with Smith's fundamental outlook—is on mathematics' ability on its own to deliver joy and inspire admiration of its immortal truths. These are emotions many practicing mathematicians and mathematics educators share; Smith's references to music, art, sculpture, poetry, and religion are calculated to convey to those who are not so engaged, some sense of how thoughtful mathematicians value their field—as a grand enterprise of magnificent intrinsic worth.

*In the Shadow of the Palms* offers snapshots of the many ideas found in Smith's prolific writings about

mathematics, mathematics education, and history of mathematics. It may not attract readers, though, who do not already understand and appreciate Smith's significance for these fields. Abbey himself acknowledges that his booklet “only scratches the surface of [Smith's] contributions” (p. 4). A recent conference devoted to David Eugene Smith and the Historiography of Mathematics (Paris, 2019) is a step toward recognizing Smith's importance, but a comprehensive scholarly treatment of Smith's work within his historical time period remains to be written.

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## ORIGINS

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**THE ORIGIN OF HUMANITY AND EVOLUTION: Science and Scripture in Conversation** by Andrew Loke. New York: Bloomsbury, 2022. viii + 200 pages. Paperback; \$39.95. ISBN: 9780567706409.

On the cover of its June 2011 issue, readers of *Christianity Today* were greeted by the portrait of a distinctly ancient yet still remarkably human figure. Hovering nearby stands the intriguing title, “The Search for the Historical Adam.” What had been a mostly academic debate had burst onto the popular scene. This article, arguably more than anything else, revealed the state of the scholarly debate, which, in a word, was not looking promising for traditionalists. A litany of high-profile figures, such as Peter Enns, Dennis Venema, and Scot McKnight, had struck successive blows to the long-cherished view of an original couple.

Just over a decade later, it seems a crisis may have been averted. Biologists and theologians have since offered not just one but multiple competing models that preserve both the genetic data and a doctrine of inerrancy. The debate has now shifted from “if Adam and Eve can be squared with contemporary science” to “how we ought to pair the two.” The two most prominent attempts have been the recent pair of books by Joshua Swamidass and William Lane Craig, yet with the publication of *The Origin of Humanity and Evolution* by the accomplished philosopher Andrew Loke, a third major model has entered the discussion.

However, it would be a mistake to assume that Loke's work focuses solely or even chiefly on the question of the historical Adam. Rather, his more ambitious project is to provide a comprehensive interpretation of Genesis 1–9 in conversation with contemporary science. In chapter 1, Loke distinguishes between three different projects that are often conflated: (A) interpreting the

## Book Reviews

Bible, (B) showing the Bible to be true, and (C) showing there is no incompatibility between science and the Bible. Loke's project primarily undertakes Task C; as such, he is not suggesting the model he proposes is conveyed by scripture or would have even been known by the authors of the Genesis text. Rather, his more modest proposal is that the truths communicated by the early chapters of the Bible can be shown to accord with current biological data. Consequently, the much-exaggerated claims of conflict between science and scripture have yet to be justified.

Yet before Loke ventures to substantiate this claim, chapter 2 outlines his hermeneutical strategy. Loke affirms the reality of divine accommodation: God's revelations in the scriptural texts were communicated in a fashion his listeners would understand. However, Loke resists a strong view of accommodation that would deny a doctrine of inerrancy concerning scripture's statements regarding the physical world, defending the place of the latter doctrine in church history. What scripture says about both God and the natural world, he claims, is wholly accurate if interpreted correctly. How, then, does one square the creation account with the reality of an ancient cosmos? The task of the third chapter is to accomplish this reconciliation. Loke posits the interesting proposal that God ensured that the Genesis account was left intentionally vague to interpretation so that it might accommodate the cosmological understandings of people from different eras. Nevertheless, the core historical facts are still discernable, and Loke provides two possible interpretations for the creation account. While John Walton's functional view consumes the bulk of the discussion (though not without some minor disagreements by Loke), Loke offers C. John Collins's analogical interpretation as a possible alternative.

Chapter 4 then defends the compatibility of Loke's view with an evolutionary account, and the Garden as a localized area safeguarded from an imperfect outer world. Adam and his descendants were tasked with subduing the whole of creation by extending the boundaries of the Edenic paradise; they failed due to their sinful acts. This leads to the climactic fifth chapter that outlines Loke's model for the historical Adam. Loke notes the similarity between his model and the *Homo divinus* model offered by John Stott. According to this model, other anatomically modern *Homo sapiens* were present during Adam's time; however, only Adam and Eve were truly human since they alone possessed the image of God with all its substantial, relational, functional, and eschatological properties. In other words, only Adam and his descendants bore all the necessary traits, including a special election by God, that would qualify

one as fully human. However, Loke grants that it is virtually certain other hominids contributed to the genetic diversity through intermarriage with Image-Bearers. Nevertheless, it is wholly possible for Adam to be a genealogical ancestor to all modern humans as Joshua Swamidass's research has shown. Thus, Loke's model preserves the much-valued claim that all humans today are, in fact, truly human.

When, exactly, did this original couple live? Loke takes no strong stance on the timing, and in his final chapter, he addresses these possibilities in conversation with the Flood narrative. Like Swamidass's model, it is entirely possible to place Adam and Eve in the near past (around 6,000 years ago). However, the presence of cave art—a remarkably human talent—predating this period moves Loke to opt for an earlier, far more ancient date. The Flood account poses no problem for either option if one accepts that a literal interpretation of the account does not demand a global interpretation.

Thus, Loke provides a model that, in his own words, escapes the Charybdis of young earth creationism without sailing headlong into the Scylla of biblical minimalism. Similar efforts have always risked a Procrustean amputation of either the theology or the science, cleaving off whatever is necessary to arrive at some violent and unnatural fit, yet Loke cautiously guards the most precious doctrines central to the theology of humanity's primordial progenitor without sacrificing solid scientific evidence. It is an impressive task, to say the least, and it is one that can confidently stand next to celebrated competing models. However, many might be offended by the assertion that pre-Adamite hominids were not truly human, and even Loke's suggestion of universal salvation for such beings may not soften the blow. The idea that God would deny full humanity to such beings will still seem like an unjust (or, at the very least, unfair) divine act. While Loke does an admirable job defending his stance from this difficult theological objection, one minor critique is that, while Loke's view seems motivated by a commitment to scriptural truth, his position lacks a sufficient defense of its biblical foundation. Why assume Adam must be the first human? Other models have argued differently, and the scriptural reasoning for Loke's position is relatively short and somewhat undeveloped. In fact, Loke spends significant time only on Acts 17:26, and, even here, he does not address many other proposed interpretations. Thus, the most controversial claim of the book lacks what Loke undoubtedly would regard as its most robust support: the biblical justification for Adam as the first human. Unquestionably, Loke has proven himself more than worthy of this hermeneutical task with his

other publications, yet the interested reader will have to search elsewhere for an answer on this topic.

But perhaps the most generous critique is one that asks for more. Brimming with Loke's customary brilliance and eloquence, it is difficult to deny this title's place among the best to emerge from the debate about Eden's infamous couple. By no means has the dispute ended, but contributions by Loke and others have helped to stabilize the ground so fiercely shaken just a few years ago.

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## PHILOSOPHY OF SCIENCE

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**NATURAL PHILOSOPHY: On Retrieving a Lost Disciplinary Imaginary** by Alister McGrath. Oxford, UK: Oxford University Press, 2023. 256 pages. Hardcover; \$39.95. ISBN: 9780192865731.

In this book, Alister McGrath provides an intellectual history and critique of what is now referred to as natural science, as well as a proposed re-conception of science going forward. The modern conception of science has its roots in something much older, referred to in the premodern world as “natural philosophy,” and this older conception—McGrath argues—is one which was both richer and much more integrated with the rest of knowledge than is natural philosophy's contemporary stepchild, “science.” The book has two parts. In Part 1, McGrath successfully labors to give an accessible introduction to the historical conception and development of natural philosophy and its trajectory/transformation towards contemporary “science,” followed in Part 2 by a proposed direction *out* of the predicament which he and others see modern/postmodern science to be in.

In Part 1, over the course of five chapters, McGrath first lays out this history. In chapter one, he starts with natural philosophy as an intellectual enterprise finding its origins in the pre-Christian Greeks via Aristotle. In chapter 2, McGrath outlines how natural philosophy then underwent significant development and enrichment through what McGrath calls the “consolidation” of natural philosophy up through the high Middle Ages. On this scheme, a study of the natural world was guided first and foremost by a reverence for God, and an impulse to find the operations of the natural world as understood and explained by principles which were consistent with what God has revealed through both scripture and the church. Natural philosophy was therefore seen as but one chapter of a much larger story,

in which understanding this story could be had only if one's heart were grounded in religious piety and one's intellect governed by proper theology (as handed down by church hierarchs).

Chapters 3 through 5 outline the ways through which natural philosophy underwent fundamental metamorphosis for the worse. In stages brought about by the sociological effects of the Copernican revolution, the Protestant Reformation, the scientific revolution, the Enlightenment, and finally the Darwinian revolution, natural philosophy became disenchanted and dis-integrated from the cohesive place it once held as part of a totalizing theological-cosmological worldview of the premoderns; it devolved into a dis-integrated, compartmentalized, and fragmented version of itself, as evidenced by the ever increasing creation of new “sub-disciplines” of modern science, which are all largely closed off from one another and which do not enjoy any kind of real synthesis as the premodern intellectual enterprises once did. This modern endeavor, furthermore, seems to be more concerned about extending human's domination over nature (*technē*) than it is about truly understanding (*episteme*) the world that God created. Thus, devoid of a “disciplinary imaginary” which serves as an organizing principle, the study of natural philosophy has become a shell of what it once was. This shell is the “science” that we speak of and study today.

In Part 2, McGrath spends the last five chapters of the book offering scientists and philosophers of science a proposed way forward, a way which might recover at least some of the integration and richness that natural philosophy once enjoyed. He does this by employing a heuristic that comes from Karl Popper's conception of what Popper called the “three worlds,” which Popper saw as distinct but related “realms” that encompass the scope of what can be known. On this scheme, the first world is that of objectivity or mind-independent objects, the world of “physical objects or physical states.” The second world is that of person or mind-dependent entities—the world of subjectivity, such as emotion, affect, and aesthetic value. The third world is one that acts as a sort of bridge between the first two, one which contains “human intellectual constructions and artefacts” such as scientific theories, moral values, and social constructions. McGrath points out that Popper's own development of this idea is not “entirely satisfactory” (p. 129), and McGrath proceeds to build his own conception using this framework of the “three worlds” as a heuristic tool, borrowing from Popper little else other than the basic idea itself.

McGrath begins his proposed “disciplinary imaginary” with an outline that builds from this third world, the world of *theoria*. This is the world of mental models and