

the church. Among books advocating evolutionary creation, it has particular strengths: a strong concern for evangelism and pastoral care, practical advice for education both Christian and secular, and a lovingly respectful but firm attitude to readers who may be skeptical. Sensible solutions to difficulties with certain passages in the New Testament are offered. The book focuses on central issues, so that some topics, such as longevity of the patriarchs, are not discussed. Sharing his excitement and joy in knowing God better by understanding the wonders of evolution, Fugle succeeds in showing why evolutionary creation is a “wholly accurate, encompassing and positive view.” ASA members should get this book into their church libraries, and encourage their pastors to read it.

Reviewed by Charles E. Chaffey, Professor Emeritus, Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, ON M5S 3E5.

THE WORLD IS NOT SIX THOUSAND YEARS OLD—SO WHAT? by Antoine Bret. Eugene, OR: Cascade Books, 2014. 128 pages. Paperback; \$16.00. ISBN: 1620327058.

There are many complicated background issues that contribute to the ongoing science-religion debates—enough to render simple resolution of disparate viewpoints difficult at best. I have often noted that even when talking with friends whose viewpoints are very similar to my own that we have radically different points of emphasis, foundational assumptions, and ways of communicating our best present understandings. Within the community of believers we have a responsibility to continue the conversation while we follow the advice of St. Peter as we discuss and argue with “gentleness and respect.”

With such a pugnacious title, one might expect Antoine Bret’s book to be a harsh polemic against the young-earth creationist (YEC) perspective. While Bret’s concerns with YEC views are sincere and urgent, the reader will not doubt his genuine desire to “strengthen the faith of many.” Bret, who has held university positions in Spain and France as well as serving as a minister in Madrid, is an excellent writer with a keen intellect and a great knowledge of the content and habits of thought in the field of physics.

This book provides a physicist’s perspective on the narrow question that it considers. Bret makes peripheral reference to scientific issues outside his specialty area but throughout this brief book—whether addressing his conception of science, the particulars of scientific dating techniques, or even his discussion of biblical interpretation—he speaks with the voice of a physicist.

Bret begins by providing a clear confession of his faith, establishing his *bona fides* as a traditional Nicene Creed Christian. He then considers two issues of biblical interpretation before turning his attention to questions of physical law. In the first, he considers passages in scripture that attribute active roles for God in nature to which natural explanations can also be applied, as in the example of Matthew 5:45, “God causes his sun to rise.” In this and many other examples in the Bible, God is said to be responsible for something that can also be explained scientifically. Considering scriptural examples across a range of scientific disciplines, Bret makes a providential case against the “God of the gaps” perspective, saying “the premise that any natural explanation means that God was not involved is *biblically* flawed,” and that “God’s role does not stop when the textbook starts. He is in the textbook as well.”

Chapter two addresses the question of whether Genesis 1 should be read literally. First appealing to writings of early church fathers, including Origen and Victorinus, and then citing examples from both Testaments that are clearly symbolic or poetic, Bret argues that the Bible contains verses that must be nonliteral, and that others “are likely to be so and still others *may* be so.” Sorting out which is which may be difficult, but “the reliability of the Bible is never at stake—only the reliability of its interpreter.”

The third chapter discusses the nature of science in the context of some commonly held misconceptions. Bret’s choice of topics in this section is thought-provoking and illustrative of the deeply personalized approaches to scientific philosophy that one finds among different individuals. He does not directly take on the question of “what is science?” that tends to divide theistic scientists in the YEC community from methodological naturalists, but works his way through an interesting discourse on the laws of nature that emphasizes their progressive development, discussing the principle that “new laws have to *contain* the old ones,” the idea of a “validity domain,” and the importance of the “supervisors” of new scientific developments: logic and observation. By citing examples of misconceptions, Bret defends the objectivity of the scientific community (specifically physicists)—a community that he asserts does *not* have any axe to grind against the Bible, that strives continually to *disprove* its own theories, and that utilizes a literature system that preserves the integrity of the enterprise. All of these discussions are illustrated with well-chosen physics examples along with diagrams and equations that strengthen the presentation.

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The final two chapters make Bret's scientific case for an old earth. Rather than comprehensively considering the many arguments and pieces of data in their totality, Bret has prudently restricted himself to a more in-depth scientific treatment of just two issues, explaining that

I won't review every single one of these evidences, for two reasons: first, I want to keep this book short, and second, I don't want to leave my area of expertise and so risk being inaccurate.

The two dating methods that he considers are starlight transit and radiometric dating. For a reader seeking knowledge about the science involved in determining the age of the earth, these final chapters provide a wealth of information—lessons taught by a master physics teacher whose instructional approach is entertaining and enlightening. Data is wielded, diagrams are marshaled, and the physics is illuminated. Being familiar with the YEC arguments in these areas, Bret addresses the question of whether the assumptions necessary for the veracity of the two methods, i.e., the constancy of light speed and radioactive decay rates over time, are valid or not. Along with reviewing the procedures used to determine astronomical distances, he argues that as we look back into the past that comes to us from distant starlight, we can observe the constancy of these values—because the values are intimately associated with the laws of electromagnetism and nuclear physics which can be seen to be proceeding then as now.

There is much detail to consider in Bret's scientific discourse—some of which is reserved for two appendices. Any scientific popularization must necessarily choose a level of presentation and some will find this book a daunting read in spite of the author's best efforts at clarity. It is for this reason that many who contemplate this debate within our Christian community end up trusting the authority of one author or another, probably identifying and agreeing with those with whom they feel a kinship. Bret has made a good effort to frame an objective presentation of these physical results, and it would be difficult to find many trained physicists who would question the technical merits of the presentation.

A brief but dense conclusion to the book makes it clear that Bret fervently wishes to change minds, hoping that believers are "able to look freely at the teachings of science on any topic without feeling that our faith is being threatened." While young-earth creationists have sincere concerns that naturalistic origins theories pose a threat to Christian faith, the motives of the old-earth group are likewise authentic, as Bret explains:

In a similar way, thousands of people this year will commit spiritual suicide for nothing. They will read a book, watch a documentary, or go to college, and be confronted by the evidence for an old universe. Then they will remember the young universe theology they were taught and relegate the Bible to the level of an interesting fairy tale, at best. Thousands this year will lose their faith because no one has told them that both "God causes his sun to rise" and "the sun rises because the earth rotates" are *true*.

Perhaps some will read this quote as a contradiction of my earlier point about whether this book is a "harsh polemic," or may question the degree of "gentleness and respect" on display. But the YEC community must allow that Bret and other old-earthers are no Richard Dawkins, bent on stamping out Christian belief and other "harmful superstitions," but fellow children of God who want the best for their people—even as do they. The dialogue is difficult, but I would recommend this book to interested readers, regardless of whether they already agree with Bret or would be seeking out the other side of the argument.

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PHILOSOPHY & THEOLOGY

FROM TEILHARD TO OMEGA: Co-creating an Unfinished Universe by Ilia Delio, ed. Maryknoll, NY: Orbis Books, 2014. 256 pages. Paperback; \$30.00. ISBN: 9781626980693.

When Pierre Teilhard de Chardin died in New York City on Easter Sunday, 1955, the 73-year-old priest-paleontologist-philosopher was out of sorts with his church. The Vatican had repeatedly forbidden the publication of his philosophical works, and would continue to do so for decades to come; they further forbade the inclusion of his already-published books in Catholic libraries and bookstores. It is therefore doubtful that he or any of his close associates would have anticipated the degree of respect his name now generates, or the amount of scholarly work conducted, both inside and outside the church, to explore his ideas. Teilhard seems to be even timelier in the twenty-first century than he was in the twentieth, and is attracting a new generation of readers and fans.

From Teilhard to Omega: Co-creating an Unfinished Universe picks up a number of threads of Teilhard's ideas and attempts to advance them more fully. Issued by a respected Catholic publishing house,