

In chapters 8 and 9 (on miracles of nature), Jeeves asks a number of questions. Do miracle claims constitute proof of God? Is God a divine upholder, or occasional gap filler? Do attempts to explain miracles “[explain] them away” (pp. 140–41)? What exactly do we mean by words such as “miracle” and “supernatural”? What does the Bible mean by “signs” and “wonders”? Is there merit in trying to normalize biblical phenomena that appear to be miraculous, using modern scientific explanations? Or do such attempts only raise other problems?

Chapter 10 addresses healing miracles. If someone claims an experience/event which can be shown to have a probability of one-in-a-million, is that a miracle ... given that those odds predict that roughly 7,500 such events will occur within the present global human population? Do religious people tend to live healthier or longer lives than their secular counterparts? Studies that look at cognitive variables (depression; optimism) might suggest “yes,” while those that look at biological variables (cancers; cardiovascular events) say “no” (p. 171). Do prayers become cosmic-vending machines? Do miracle claims stand up to medical/scientific scrutiny? Do they need to?

Chapters 11 and 12 concern the multifaceted nature of faith. Jeeves describes faith as involving “credulity,” “intellectual assent,” and “the psychological processes involved in the act of believing” (p. 178), and then compares faith with belief, doubt, trust, certainty, action, and discipleship (pp. 178–82). Jeeves recounts fascinating evidence from patients suffering various forms of brain disease (Alzheimer’s, Parkinson’s), discussing how such biological injuries degrade their enjoyment of faith because they rob them of the ability to focus attention, feel emotion, or keep track of a sermon or a passage of scripture (which, Jeeves points out, is another argument against substance dualism). He also looks at how brain dysfunction affected many well-known people of faith, including Martin Luther, John Bunyan, John Wesley, William Cowper, Gerard Manley Hopkins, Lord Shaftesbury, and Christina Rossetti.

The third section focusses on a central theme in this book: that of God interacting with creation in general, and humans in particular. God does this by creating all things, including humans, in his image (as the divine creator), by constantly upholding that creation through natural laws which he has set in place to maintain it (as the divine sustainer), and by putting off his divinity and embodying himself within creation (divine self-emptying or kenosis). Here, Jeeves unpacks divine kenosis, as well as the evolutionary origins and emergence of kenotic behavior in

his creatures (otherwise commonly known as altruism, love, compassion, and empathy).

The book concludes with a valuable resource for self-reflection and group study. For each of the thirteen chapters, he provides a few relevant scripture passages, a variety of short paragraphs to review and reflect upon, a number of specific questions for discussion, and suggestions for further readings (books, articles, web-links).

The book is written at the level of a well-read and informed lay-person. No formal training in science or religion is needed, although a keen interest in both is essential. Overall, I found the book very useful, and I highly recommend it. But actions speak louder than words. My first thought upon reading it was to suggest it to my own church pastor for a small group book study; he read the book, then promptly and convincingly made the sales pitch to our church leaders.

Reviewed by Luke Janssen, Emeritus Professor in the Faculty of Health Sciences, McMaster University, Hamilton, ON.

STANLEY JAKI: Science and Faith in a Realist Perspective by Alessandro Giostra. Rome, Italy: IF Press, 2019. 144 pages. Paperback; \$24.24. ISBN: 9788867881857.

The subject of this short introduction—Father Stanley L. Jaki (1924–2009), a giant in the world of science and religion—is more important than this book’s contents, a collection of conference papers and articles published between 2015 and 2019.

Readers of this journal should recognize Jaki, a Benedictine priest with doctorates in theology and physics, 1975–1976 Gifford lecturer, 1987 Templeton Prize winner, and professor at Seton Hall University, for his prolific, valuable work in the history of the relations between theology and science. He sharply contrasted Christian and non-Christian/scientific cosmologies and unfortunately, often slipped into polemics and apologetics. The title of Stacy Trasanco’s 2014 examination of his work, *Science Was Born of Christianity*, captures Jaki’s key thesis. Science in non-Christian cultures was, in Jaki’s (in)famous and frequent characterizations, “stillborn” and a “failure” (e.g., see Giostra, pp. 99, 113). Incidentally, Giostra seems unaware that various Protestant scholars shared Jaki’s key thesis and arguments.

The Introduction begins with a quotation from Jaki that so-called conflicts between science and religion “must be seen against objective reality, which alone has the power to unmask illusions.” Jaki continued, “There may be clashes between science and religion, or rather between some religionists and some

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scientists, but no irresolvable fundamental conflict" (p. 15).

This raises two other crucial aspects of Jaki's approach: his realist epistemology and his claim that, properly understood, science and Christian theology cannot be in conflict. Why? Because what Jaki opposed was not science itself—which he saw as specific knowledge of the physical world that was quantifiable and mathematically expressible—but ideologies that were attached to science in the eighteenth and nineteenth centuries, that is, materialism, naturalism, reductionism, positivism, pantheism, and atheism.

For Jaki, the real problem for Christian approaches to the natural world was the scientism which dismissed theology, especially Catholicism, as superstition, dogmatism, and delusion. Jaki followed the groundbreaking work of Pierre Duhem in arguing that the impetus theory of the fourteenth-century philosopher John Buridan was the first sign of the principle of inertia, the first law of Newtonian physics. One of the foundational shifts in the birth of a new "revolutionary" science in the Christian West was a post-Aristotelian understanding of bodies in motion (both uniform and uniformly accelerating: see chapter three for more details).

The first chapter is a bio- and bibliographical essay by an admiring Antonio Colombo that traces and situates Jaki the historian as a man of both science and faith. Chapter two lays out Jaki's critical realism and theses about the history of science and theology, in contrast to scientisms past and present that claim scientific reason as the sole trustworthy route to legitimate knowledge. The roles played by the doctrine of creation *ex nihilo* and the Christology of the pre-existent Logos in Jaki's cosmological thinking are also outlined.

Many readers will be most interested in the third chapter which surveys Jaki's writing about the notorious case of Galileo, condemned by the church in 1633 for defending Copernicus. Jaki detected scientific and theological errors in the positions of both Galileo and the church. For instance, Galileo did not provide proof of the motion of the earth around the sun. Nor did the church understand errors in Aristotelian science. Galileo was right, however, in arguing that the Bible's purpose was not to convey scientific knowledge; while the church's rejection of heliocentric cosmology was correct, given the dearth of convincing evidence for it.

Chapter four is of wider interest than its title, "The Errors of Hegelian Idealism," might suggest. Jaki's

belief that only Christian theology could give birth to the exact sciences is reviewed, along with his rejection of conflict and concord models of faith and science. His critiques of Hegelian and Marxist views of the world are thoughtfully discussed.

Jaki was unrelentingly hostile to all types of pantheism, and Plato was the most influential purveyor of that erroneous philosophy. Chapter five outlines Jaki's objections to Platonism, as well as to Plotinus's view of the universe as an emanation from an utterly transcendent One, and to Giordano Bruno's neo-Platonic animism and Hermeticism.

Jaki's interpretation of medieval Islamic cosmologists is the subject of the fifth chapter, in which the Qur'an, Averroes, and Avicenna are examined and found wanting. Monotheism by itself could not lead to science. Incorrect theology blinded those without an understanding of the world as God's creation or of Christ as Word and Savior from seeing scientific truth. This chapter is curious in several respects. On page 98, Giostra equates Christ as the only begotten Son with Jesus as the only "emanation from the Father." Emanationism is a Gnostic, Manichaeic, and neo-Platonic concept; it is not, to my knowledge, part of orthodox Catholic Trinitarian discourse. On pages 101–2, the presence of astrology in the Qur'an disqualifies it as an ancestor of modern science. But astrology then was not yet divorced from astronomy. Astrological/astronomical imagery and terminology were integral to ancient cosmologies and apocalypses, including Jewish, Christian, and Muslim ones. Lastly, pages 104–5 feature quotations in untranslated Latin.

Chapter seven is a review of the 2016 edition of Jaki's *Science and Creation*; this is one more example of content repeated elsewhere in the book. "Benedict XVI and the limits of scientific learning" is the eighth and final chapter. The former pope is presented as a Jaki-like thinker in his views of science and faith. Strangely, Benedict does not cite Jaki; this absence weakens Giostra's case somewhat.

Jaki—whose faith was shaped by the eminent French theologian and historian of medieval thought, Etienne Gilson—was a diehard Roman Catholic, wary of Protestant thought, defender of priestly celibacy and of the ineligibility of women for ordination. On the other hand, his study of both Duhem and Gilson probably sensitized Jaki to ideological claims made by scientists.

As a historian of science, Jaki was meticulous and comprehensive in his research with primary documents. His interpretations of historical texts were as

confident and swaggering as his critiques of scientists and scientism were withering. Among Jaki's more interesting and helpful contributions to scholarship are his translations and annotations of such important primary texts as Johann Heinrich Lambert's *Cosmological Letters* (1976), Immanuel Kant's *Universal Natural History and Theory of the Heavens* (1981), and Bruno's *The Ash Wednesday Supper* (1984).

Personally, I have found much of value in Jaki's *The Relevance of Physics* (1966); *Brain, Mind and Computers* (1969); *The Paradox of Olbers' Paradox* (1969); *The Milky Way* (1972); *Planets and Planetarians* (1978); *The Road of Science and the Ways to God* (1978); *Cosmos and Creator* (1980); *Genesis 1 through the Ages* (1998); *The Savior of Science* (2000); *Giordano Bruno: A Martyr of Science?* (2000); *Galileo Lessons* (2001); *Questions on Science and Religion* (2004); *The Mirage of Conflict between Science and Religion* (2009); and the second enlarged edition of his 1974 book, *Science and Creation: From Eternal Cycles to an Oscillating Universe* (2016).

Jaki also published studies of figures whose life and work most impressed him personally. These include three books (1984, 1988, 1991) on the Catholic physicist and historian of cosmology, Pierre Duhem, author of the ten-volume *Système du Monde*, and studies of English converts to Catholicism, John Henry, Cardinal Newman (2001, 2004, 2007) and G. K. Chesterton (1986, new ed., 2001).

Among Jaki's books not mentioned by Giostra but of interest to readers of this journal are *The Origin of Science and the Science of its Origin* (1979), *Angels, Apes, and Men* (1988), and *Miracles and Physics* (2004). For a complete Jaki bibliography, see <http://www.sljaki.com/>.

No translator is identified in the book under review; my guess is that Giostra, an Italian, was writing in English. Although generally clear and correct, the book contains enough small errors and infelicities to suggest that the services of a professional translator were not used. Not counting blank, title, and contents pages, this book has but 128 pages, including lots of block quotations.

For those unfamiliar with Jaki's work and not too interested in detailed studies in the history and philosophy of science and religion, this introduction is a decent start—and perhaps an end point as well. I strongly encourage curious readers to consult Jaki's own books, including his intellectual autobiography *A Mind's Matter* (2002). For other scholarly English-language perspectives on his work, see Paul Haffner, *Creation and Scientific Creativity: A Study in*

the Thought of S. L. Jaki (2nd ed., 2009); *Science and Orthodoxy* [special issue of the *Saint Austin Review* on Jaki], vol. 14, no. 3 (2014); and Paul Carr and Paul Arveson, eds., *Stanley Jaki Foundation International Congress 2015* (2020).

Reviewed by Paul Fayter, a retired pastor and historian of Victorian science and theology, who lives in Hamilton, Ontario.



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ATLAS OF AI: Power, Politics, and the Planetary Costs of Artificial Intelligence by Kate Crawford. New Haven, CT: Yale University Press, 2021. 336 pages. Hardcover; \$28.00. ISBN: 9780300209570.

Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence is Kate Crawford's analysis of the state of the AI industry. A central idea of her book is the importance of redefining Artificial Intelligence (AI). She states, "I've argued that there is much at stake in how we define AI, what its boundaries are, and who determines them: it shapes what can be seen and contested" (p. 217).

My own definition of AI goes something like this: I imagine a future where I'm sitting in a cafe drinking coffee with my friends, but in this future, one of my friends is a robot, who like me is trying to make a living in this world. A future where humans and robots live in harmony. Crawford views this definition as mythological: "These mythologies are particularly strong in the field of artificial intelligence, where the belief that human intelligence can be formalized and reproduced by machines has been axiomatic since the mid-twentieth century" (p. 5). I do not know if my definition of artificial intelligence can come true, but I am enjoying the process of building, experimenting, and dreaming.

In her book, she asks me to consider that I may be unknowingly participating, as she states, in "a material product of colonialism, with its patterns of extraction, conflict, and environmental destruction" (p. 38). The book's subtitle illuminates the purpose of the book: specifically, the power, politics, and planetary costs of usurping artificial intelligence. Of course, this is not exactly Crawford's subtitle, and this is where I both agree and disagree with her. The book's subtitle is actually *Power, Politics, and the Planetary Costs of Artificial Intelligence*. In my opinion, AI is more the canary in the coal mine. We can use the canary to detect the poisonous gases, but we cannot blame the canary for the poisonous gas. It risks missing the point. Is AI itself to be feared? Should we no longer teach or learn AI? Or is this more about