

no instrumental value. For Christians, who believe that creation mediates knowledge of God and that we are cocreators with God in the transformation of the world, living life as a mere game would be a form of hell.

In an epilogue titled “The Unending Quest,” Danaher describes Jorge Luis Borges’s short story “The Library of Babel” as a “meditation on the meaning of life in a universe of infinite possibilities” (p. 271). Our current situation, he suggests, is analogous to that of the denizens who search Borges’s fictional library for meaningful books among every possible book. Their quest is futile, for their world is an antilibRARY—a repository of mostly meaningless and misleading books. Danaher concludes: “We shouldn’t keep searching through the infinite darkness for something we ourselves can never obtain; we shouldn’t sacrifice everything else that is good in life for an unending, and unrealizable, goal” (p. 273). But what if the world is more like a library, presenting us with information? And what if our encounter with that information transforms us? And, finally, what if the telos of our quest not only matters as a transformative process but is also an end state that is already being realized through our ongoing transformation? This would cause a Christian, formed by the past, future, and present coming of Christ, to be wary of desiring or designing a utopia so far removed from the created world.

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TRANSHUMANISM

HUMANS 2.0: Scientific, Philosophical, and Theological Perspectives on Transhumanism by Fazale R. Rana with Kenneth R. Samples. Covina, CA: Reasons to Believe Press, 2019. 306 pages. Paperback; \$19.95. ISBN: 9781886653122.

Biochemist Fazale Rana and philosopher-theologian Kenneth Richard Samples work together to provide a scientific and theological account of advances related to transhumanism. Their book contains three unequal sections: one on the science of human enhancement (about 110 pages), one on the ethics of human enhancement (about 65 pages), and one on transhumanism and Christianity (about 35 pages). They conclude the book with special foci on AI and artificial wombs, and a primer on molecular biology for those with limited scientific background. Throughout the work, Rana and Samples recount storylines from the *Iron Man* comic book storyline to illustrate the involved issues.

The book achieves several worthy goals well. First, the breadth of engagement helps readers connect scientific

advance with secular and transhuman philosophy and biblical Christianity. Second, the initial section provides competent detail on the science involved, while at the same time acknowledging how quickly science develops. The authors provide enough of a foundation that readers will be able to apply the relevant principles even as science continues to develop. (For instance, the CRISPR-Cas9 chapter includes nothing about recent developments, but the reader can connect the dots.) Third, the book makes a good argument for how particular scientific developments fit into and move toward a transhumanist agenda. There is no one location where this argument is made absolutely clear, but it is implied and stressed at various points that together make the case stronger.

However, the book’s strengths are uneven and its overall impact weakened in a few key ways. First and foremost, the second two parts—handling ethics and transhumanism and Christianity—do not rise to the level of detail and sophisticated argument that the first part does. It left me with the vague sense that science is hard and complicated; ethics and the Bible are easy and straightforward. The authors, of course, say no such thing, but the level of engagement, research, and arguments gives that sense. (In particular, several of the ethical and biblical chapters are conspicuously short; this may leave the impression that there is not much to say on these topics.) Frankly, the answers provided in those sections will introduce readers to important key concepts, but they will fall a bit flat for anyone beyond a beginner’s level, and they certainly won’t convince skeptics that Christianity has much to contribute.

Second, the authors make unfortunate compromises and unhelpful proposals. For instance, they support somatic cell gene editing for human enhancement (p. 187), stating that it must, of course, be “limited,” but they provide nothing substantive to handle such limiting. Who limits? By whose judgment? How? When? Further, their advice for Christians assumes that believers will retain a high degree of cultural influence and power, which they can use to “point out” various inconsistencies to transhumanists. The role of the Christian in this whole enterprise basically boils down to occasionally piping up and “pointing out” potential challenges. I cannot help but wonder whether Christian witness might be relegated to the margins, margins which could potentially involve suffering, but which would not “point out” things to rich, smart people in white coats.

In the end, I want to like the book, and I would recommend it. I guess by that I mean I am sympathetic with the project, and enough of it is done well to make this worth a read. The scientific explanations and descriptions themselves are worth the modest price of the

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book. But I would encourage any reader to view the ethical and theological sections as starting points, just as inspiring by their incompleteness as for the content they do provide.

This book serves as a good introduction to scientific advance, the challenges that are already here and coming, and the way those challenges will be escalated and co-opted by various late modern and postmodern worldviews. We need more Christians knowledgeable about these issues, engaging the ethical and theological material as seriously as they do the scientific.

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Letters

Does Complementarity Explain Anything?

Jim Stump presents a notable defense of the view that God guides evolution in his article, "Did God Guide Our Evolution?," in *PSCF* 72, no. 1 (2020): 15–24. While I am partial to the epistemological view that he espouses, there remain some difficulties. As he points out, the idea is an old one described with different terms over the years, from cognitive dualism to complementarity to levels of explanation, to cite a few. Cognitive dualism received a surge of interest and support with the discovery of scientific complementarity. Best known is the wave-particle duality articulated by Louis de Broglie in the 1920s. Scientific complementarity gave cognitive dualism support as a fundamental principle of the universe. Its logical application to Christianity was widely publicized by, among others, Richard Bube and especially Donald MacKay, in the 1970s. The late Jack Haas took a somewhat skeptical view in his series entitled "Complementarity and Christian Thought: An Assessment" in the September 1983, December 1983, and June 1984 issues of *PSCF*. As he explained to me personally, his major concern was that complementarity didn't really explain anything.

While Jack has a point, I still find complementarity to be the best available perspective, even though it does not provide us with an understanding of divine action. The analogy of the tea kettle can help one to understand the problem. Stump attributes this analogy to John Polkinghorne while acknowledging in a footnote that Polkinghorne was "probably not" the first to use it. The earliest reference I have found is in the book *Christianity in a Mechanistic Universe*, edited by Donald M. MacKay and published in 1965. In his essay contribution to that book, Frank H. T. Rhodes, ninth president of Cornell University from 1977 to 1995, refers to "Dr Douglas

Spanner's example of the boiling kettle ..." (p. 42) and describes the identical analogy and application.

In this analogy, the explanation for "why is the tea kettle boiling" can be either "I want some tea" or "the thermal energy of the flame transfers energy to the water beyond its boiling point." These are complementary and not mutually exclusive explanations. But all of us are intuitively aware that humans have the agency to translate the desire to have some tea into igniting the fire or activating the electrical switch that provides the heat to boil the water. Though we may not understand all the details involving our consciousness and free will in generating and carrying out our desires, we do understand the connection. In contrast, we do not understand divine action through which God translates his ultimate purposes into guidance of evolution. The intelligent design community feels that they do not need to provide such a mechanism but merely need to demonstrate that there was such guidance. Stump rejects Russell's idea of quantum interference by God as being inadequate. He also rejects, perhaps inappropriately, Barrigar's probabilistic view of God's purposes as too deistic. The epistemological view does not provide insight into any means by which divine action actually guides evolution. Complementarity seems to be an accurate description that two different discourses are necessary to fully represent phenomena. But it fails to explain the relationship between those discourses.

We have a biblical basis for claiming that God can work his purposes through random processes (see, for example, 1 Kings 22:34 and Acts 1:26). Yet we have no insight into how this is achieved. The mysterious way in which God guides evolution or anything else remains mysterious. The evidence in science is that evolution with key elements of randomness accurately describes the development of all life forms of which we are aware. The inference that God does, in fact, guide evolution, as well as all of nature, is our interpretation of how God carries out his purposes as revealed in God's Word.

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The Agape/Probability Proposal Is Not Deist

Jim Stump has recently addressed the question, "Did God Guide Our Evolution?"¹ Along the way, he rejects three strategies for reconciling science and theology, including this writer's *Agape/Probability (A/P) proposal*.² Stump rejects the A/P proposal "because of its implications for God's distance from the created order"³—that the A/P proposal leaves God as a "spectator" to creation as the universe unfolds from its initial