

Longtime readers in science and theology will be familiar with most of the topics and themes presented by Garte, but I found that his original approach and expertise were quite interesting and offered some fresh angles. For example, in one meditation he describes gene regulation networks and makes an analogy to Christian social networks and the body of Christ. In another meditation, Garte connects a discussion of the peer-review process in science, including ethical guidelines, with the ethics of living in Christian community and the judgments and corrections that are sometimes necessary there.

Some might describe the final wrap-up sentences of each meditation as too saccharine, but I found that these concluding sentences testify to the pure joy and thrill that Garte feels about his relatively new-found Christian faith—a sentiment that is bursting throughout this entire book. As I read through the meditations, I often found myself reflecting not only on the grandeur of creation and the goodness of God, but also on how amazing it is that the power of the Gospel could convert and call to Christian service an atheist scientist as prominent as Sy Garte.

Reviewed by Peter Walhout, Chemistry Department, Wheaton College, Wheaton, IL 60187.

TECHNOLOGY

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THE SINGULARITY IS NEARER: When We Merge with AI by Ray Kurzweil. Viking, 2024. 419 pages. Hardcover; \$20.21. ISBN: 9780399562761.

In summer 2014, on my advisor's advice, I began to explore transhumanism as a dissertation topic. I soon encountered Ray Kurzweil's 2005 book, *The Singularity Is Near*, and its forecast that around 2045 computer systems would attain superhuman intelligence. This development, according to Kurzweil, would lead to an age of rapid and unpredictable progress known as the "Singularity." Fundamental changes in the human condition would follow.

But there was a problem: whenever I mentioned Kurzweil, my frustrated advisor would respond, "Ugh! Why should we pay any attention to Ray Kurzweil? How could *he* ever know what will happen in 2045?" (I took such questions seriously, but maybe my advisor just wanted me to think!) My best answer was, "He may be a kook, but many accept his claims. Kurzweil's ideas are affecting society now, so they are worthy of study."

Today, with ChatGPT and other large language model (LLM) systems in everyday use, and more computational tools on the horizon, artificial intelligence (AI) has become a major factor in society. Its benefits are changing how people and organizations operate, how ideas

are generated and refined, the way we identify and solve problems, and even how we go to the grocery store. Conversely, AI is a worry to many people, such as educators concerned about its impact on student learning; Noam Chomsky called ChatGPT "plagiarism software." In this context, Kurzweil's new book is a timely—and important—update on his ideas from nineteen years ago.

Kurzweil's introduction and first chapter reiterate his premise that information is the very essence of reality. He sees cosmological history as a series of information-driven epochs—from epoch one, "the birth of the laws of physics," soon after the Big Bang, to epoch six, "where our intelligence spreads throughout the universe" (pp. 7–8). Today, Kurzweil argues, we are entering epoch five, driven by dramatic increases in the cost-performance of computers. It will be, according to the book's subtitle, *When We Merge with AI*.

In chapter two, "Reinventing Intelligence," Kurzweil presents a brief history of AI before drawing comparisons between digital computers and the human brain. His focus is the development and future of brain-computer interfaces. Today's Neuralink trials will, according to Kurzweil, lead to a tomorrow when neocortex functions will occur in hybrid systems, biological brains working seamlessly with artificial computation machinery.

Chapters three through six analyze the potential for AI to exert an influence on important areas of human existence, imagining how they can be accommodated: consciousness and personal identity, quality of life, employment and meaning, and mental health and physical well-being. Kurzweil addressed these things in *The Singularity Is Near* and other books, but in *Nearer* he goes into greater depth, and in a more straightforward and factual manner. If his previous work was a Singularity sales pitch, his 2024 text is framed as an update or progress report.

In chapter seven, Kurzweil addresses forms of "peril" that will intensify with progress toward the Singularity. He recognizes that AI can be weaponized by terrorists and hostile states, but he does not directly address the possibility that sentient computers could become hostile toward human civilization. (For that possibility, see Nick Bostrom's 2014 book, *Superintelligence: Paths, Dangers, Strategies*.) Ever an optimist, Kurzweil believes people—individually, corporately, and working with AI—can identify and overcome such threats.

Kurzweil's final chapter is a six-page "Dialogue with Cassandra," an exchange between Ray and an unidentified being, perhaps an AI. Their discussion touches many top-level concerns that people express about futuristic technology. The dialogue effectively summarizes Kurzweil's views of the past and hopes for the future.

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The book concludes with a 20-page appendix, 88 pages of notes and references, and a 19-page index.

My advisor's views notwithstanding, I am much more impressed with Kurzweil now than I was before, though I still have many reservations about his claims. *The Singularity Is Nearer* is a much better book, though it must be read with an attitude toward critical thinking. No human—or AI—can predict the future with accuracy, but it is often possible to identify consequences and trends that will affect it. Even when they are wrong, futurists help us think through important matters in advance, in the here and now. Superhuman AI and the transhumanist future that may proceed from it speak to matters of theological importance. Believers would do well to consider these matters in advance, so I recommend *The Singularity Is Nearer*, but with some cautions.

First, although Kurzweil has some religious sensibilities, he is an atheist. His attitude toward religion was expressed long ago in *The Singularity Is Near*. Against its central place in human history, he dismisses religion as “deathist rationalization—that is, rationalizing the tragedy of death as a good thing” (p. 372). Asked if God exists, his (in)famous answer was “Not yet.” He is waiting for his AI god to appear after 2045 in some kind of post-secularity superintelligence.

Kurzweil's atheism undermines his arguments. Unlike so-called Christian transhumanists, who also aspire to transcend the human condition through technoscience, his notions of transcendence are without roots. He relies on human conceptions of good or bad, ethical or not, without links to God or anything else that is objectively transcendent. So, he would optimize many things, but it seems progress and optimization only mean getting something he wants, nothing more.

Second, even before his Singularity, Kurzweil believes in predestination. He consistently describes computation progress as *inexorable, inevitable, necessary, destined, fated*, and other terms of certitude. He correctly anticipates social disruptions on the way to the Singularity, but he is unyielding about their resolution; society shall yield. Limits are intolerable and unsustainable; for in Kurzweil's view, informational determinism is built into the cosmos. Yes, short-term delays are possible, but our technological destiny shall have its way.

Third, like its predecessor, *The Singularity Is Nearer* is a sales pitch, though more informative. Consider again what transhumanists promote: a future that is, quite literally, dehumanized. Although created in the image and likeness of God, with physical bodies like our Lord Jesus, biological human beings are to be replaced, our cognitive faculties disembodied, our minds uploaded into computer systems. However, when the Singularity is past, will anyone other than transhumanists regard the

new world's inhabitants as human? Kurzweil's 2005 subtitle, *When Humans Transcend Biology*, reveals the goal, but transcendence that eliminates our biology is inherently dehumanizing.

The Singularity Is Nearer has a softer tone, with a subtitle less offensive to those who love humanity: *When We Merge with AI*. It seems that “we” are retained. The claim is that human beings have always loved their tools, haven't they? So, transhumanists aren't doing anything different! Nothing has changed, even as they would fundamentally change our existence. Kurzweil and his allies want to minimize resistance to AI bliss, so for marketing purposes, human life, faulty as it is, will remain, at least in their rhetoric. Nevertheless, the book makes it clear that AI will dominate our being, progressively changing and eventually eliminating our created nature. Kurzweil's dream remains inhuman.

The transhumanists leave many important factors out of the picture. Their future is not defined, yet they claim it is inevitable? May not society say no? Should not governments regulate AI? What does Christian faith have to say about technology and the future? With concerns like these unanswered, Kurzweil's claims are empty, distasteful, and impossible to swallow. Perhaps my advisor was right after all.

Reviewed by David C. Winyard Sr., Department of Engineering, Grace College & Seminary, Winona Lake, IN 46590.

THEOLOGY

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DETERMINED: A Science of Life Without Free Will by Robert M. Sapolsky. Penguin, 2023. 528 pages. Hardcover; \$35.00. ISBN: 9780525560975.

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FREE AGENTS: How Evolution Gave Us Free Will by Kevin J. Mitchell. Princeton University Press, 2023. 352 pages. Hardcover; \$30.00. ISBN: 9780691226231.

For almost as long as we have written records, humans have been discussing how free our will is. In ancient times, the constraining factor was typically the gods or fate. There are still today some theologians who believe a proper understanding of the divine compels them to recognize what Luther called “the bondage of the will.” That is, on theological grounds, they deny free will. More common now, however, are those who deny any room for free will on the basis of what they consider to be a proper understanding of science.

Prominent among the latter is Stanford biologist and neurosurgeon Robert Sapolsky, whose book *Determined: A Science of Life Without Free Will* argues that there is no free will and that if there is no free will, then it is wrong