

Velde, can provide more insight into the divine attributes, especially immanence, and so can offer a more promising participation metaphysics. At the very least, the jury is out as to whether the (strategically valid) emphasis on intellectual conversion and cognitional theory can carry the weight of a robust metaphysics. But, to be fair, O. is not rebuilding natural theology but “reconsidering” it—that is, asking contemporary culture to engage with its arguments—and in that he succeeds magnificently.

O. hopes that his book will contribute to the growth of a community of metaphysically rigorous thinkers that is analogous to those communities that share mathematical or scientific methods. One of the goals of such a community is to free itself from the dominant scientific stranglehold over meaning because it has grounded its distinct terms and relations upon the primordial drive for (and recognition of alignment between) truth and reality. The result of the growth of such a community will be to shift the probabilities in favor of the public acceptance of natural theology. O.’s book is a persuasive argument for and an inspiring invitation to a collaborative enterprise of profound importance.

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The Runes of Evolution: How the Universe Became Self-Aware. By Simon Conway Morris. West Conshohocken, PA: Templeton, 2015. Pp. xiii, 493. \$27.97.

Morris is a leading evolutionary biologist best known for his work on the hypothesis of evolutionary convergence. Nature, in other words, seems to have a built-in mechanism to solve problems in adaptation to changing circumstances in remarkably similar ways (<http://www.mapoflife.org>). The tentacles of an octopus, for example, functionally resemble the mode of operation of a human arm: “when evolution needs an arm, then there really is an ‘optimal design.’ That’s the way the world works” (14). Convergence thus severely restricts the purely theoretical potentialities of cosmic evolution. But for that same reason, evolution is remarkably predictable; it is not the random outcome of natural selection as many Darwinians believe. For example, noting the convergent types of social play in some species of birds and mammals, one concludes that intelligence, tool-making, and even technology are evolutionarily inevitable (19). M’s book is a huge compilation of such instances of convergence not only in the animal kingdom but in the plant world.

The capacity for vision and the perception of colors along with the capacity for smell, taste, and touch are found very early in the evolution of animal species. With the presence of neural networks in brainless sponges, growth in brain size and complexity among vertebrates were an inevitable consequence (252). Language is the medium of communication among human beings, but so also is birdsong the medium of communication for many species of birds (266). Toward the end of his book, M. speculates, “Suppose mind is not only independent but also preexistent to matter. If that was the case, then evolution is simply the process to discover mind” (286). Similarly, “abstract

mathematical constraints may have determined not only the form of the universe and its physical laws . . . but also the forms of evolutionary stable strategies, of sustainable social practices, and of the laws of individual thought, whenever and wherever life emerged" (297).

This book was presumably written by Morris more for fellow natural scientists than for philosophers and theologians, but in each case so as to prove that his hypothesis of ongoing convergence in evolution is not a series of fortuitous coincidences but empirical evidence of established patterns or in-built mechanisms within the evolutionary process. Three hundred pages of text with double columns of print on each page and 150 pages of endnotes make that clear. Names of different species, genera, families, orders, classes, and so on turn up on virtually every page so that the non-professional reader ends up hunting for summary statements by Morris at the end of each major subdivision within the 26 chapters. Yet despite its obvious density and degree of detail for the ordinary reader, the implications of this book for philosophical/theological understanding of the God–world relationship and for the classic distinction between the natural and the supernatural within creation are in my judgment very significant.

M. offers a strictly naturalistic interpretation of evolution. As would be expected in the work of a natural scientist, there is no reference either to God or to divine involvement in the evolutionary process. Yet the evolutionary process has nonetheless, according to M.'s hypothesis, a built-in directionality toward the emergence of mind and even toward a transcendence of the purely material conditions of existence and activity in this world. How then is one to understand the workings of divine providence in this allegedly self-organizing and self-directed evolutionary process? A Deist might be content to affirm that God created the world, endowed it with its intrinsic laws of operation, and now waits to see how things are working out. Biblically inspired theists certainly demand much more divine involvement in the evolutionary process than that. But how do God and all the creatures of this world work in tandem to achieve common goals and values within the cosmic process and yet at the same time retain their own different modes of operation? Can God, for example, really share causality with a creature so that the creature is not just the instrument of divine causality at that moment but in its own way the immediate cause of what happens by way of a contingent event? Aquinas says yes (*ST I*, q. 22, aa. 3, 4). But how is this to be philosophically explained without abandoning the traditional understanding of unilateral divine efficient causality vis-à-vis creatures in favor of a bilateral or reciprocal causal relation between God and creatures in which God is just as responsive to the initiative of the creature as the creature is responsive to the initiative of God in its regard? Moreover, to justify this claim of bilateral or reciprocal causation between God and creatures, one would presumably have to make significant changes in one's understanding of the classical God–world relationship within Aristotelian-Thomistic metaphysics.

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