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Alexei V. Nesteruk. *Light from the East: Theology, Science, and the Eastern Orthodox Tradition*. Minneapolis: Fortress, 2003. Pp. 287. \$14.96 (Paper).

[1] The split between science and religion is a social problem. Pastoral teaching loses conviction when it comes from pastors uncomfortable with basic elements of science. Consequently, a book such as Nesteruk's *Light from the East* is valuable. In it, the author presents himself as a faithful Christian to probe the deepest questions raised by physics, without running away from either physics or theology.

[2] The book divides into two parts. The first five chapters develop an approach to science and religion that Nesteruk calls "Apophatic Monodualism." The last three chapters then apply Apophatic Monodualism to problems with creation, time, and the human role in the cosmos, drawing on scientific discussions on these areas.

[3] In chapter one Nesteruk raises the historical question of why Orthodoxy does not interact extensively with scientific thought. He points out the role of apophaticism in Orthodox understanding of God. This is the fundamental need for church members to interact with God experientially, not simply intellectually. Christians accomplish apophatic interaction through meditation analogous to the *via negativa*, both rejecting and accepting images of God derived from creation. Nesteruk outlines the need for a "New Patristic Synthesis" that will allow for reciprocal interaction of empirical science and apophatic theology without either assimilating the other.

[4] In chapter two he reviews the historical development of the patristic synthesis that united Platonic philosophy, science, and biblical thought. He then describes the development of independent western science. Nesteruk argues that special factors notable in Augustinian theology permitted science to develop in an independent and unhampered intellectual domain as the "handmaiden of theology." This freedom permitted a unique development of science, but also rendered it separate from theology.

[5] From this point, Nesteruk then turns to a description of what Orthodox theology offers. In chapter three he reviews key concepts of Orthodox thought, including the possibility of an economic, dogmatic theology in support of a mystical theology, and the existence of

natural thought as a monistic subdomain within a dualistic theology. Nesteruk proposes that Orthodox theological ideas, never split from science, are now particularly capable of uniting a developed science with theology.

[6] Chapter 4 is the crucial philosophical chapter, in which Nesteruk develops apophatic monodualism. Crudely summarized as a process, Nesteruk argues that theological appreciation of science should follow these steps:

- Examine a scientific idea in all of its details until philosophical problems appear.
- Verify that the philosophical problems, from a dualist perspective, come from comparing entities of different ontological status.
- Develop an apophatic opposition summarizing the problem. This opposition both affirms and denies a naturally-derived claim about God.
- When positivistic monism is avoided, this apophatic opposition is a place where science points outside itself to theology.
- The apophatic opposition is now available for prayer and meditation, deepening an individual's quest for mystical understanding of God.

[7] Chapter five is the first of three chapters to apply this method. Nesteruk uses it to analyze the cosmology discussed by Hawking in *A Brief History of Time*. Hawking proposes that, *prior to the big bang*, space had four dimensions none of which was temporal. He posits the term "imaginary time." This is important to Hawking because it does not imply that there was a beginning to the universe; the universe merely developed naturally out of a timeless state.

[8] A short technical explanation will clarify the problem. According to current theory, the big bang is the mathematical point of cosmic origin where time = 0, and pressure and temperature = infinity. Theory predicts this state as a limit when you take the relativistic model of the current expanding universe and run the clock backward. There had been occasional enthusiasm about this among many religious leaders, even at the highest levels of the Roman Catholic Church, since it seems to require that the universe starts at a "zero point," thus, creation *ex nihilo*. Hawking is arguing that the "zero point" is only an indication that the equations have been pushed beyond their usefulness and need to be replaced with better equations. Now Hawking is seeking to deflate any hope among religious thinkers that physicists have found hard evidence of creation.

[9] Hawking suggests that his imaginary time model describes a universe with no beginning. "What place, then, for a creator?" he asks. Nesteruk's answer, based on the steps outlined above, can be summarized as the following.

- Hawking's use of imaginary time to question the existence of a creator is philosophically suspect.
- The root of the problem is that a timeless mathematical construct cannot be assigned ontological reality.
- Hawking's error suggests a plausible apophatic opposition:

- Thesis: Hawking's imaginary time 4-sphere exists and is absolutely necessary for the visible universe to exist
- Antithesis: Hawking's imaginary time 4-sphere does not exist; it belongs to a different ontological realm.
- This opposition suggests that *creation ex nihilo* was accomplished, in Hawking's model, through the transcendent God's establishment of both the sensibly detectable universe and the universe of mathematical ideas. These two can be bridged by human cognition.
- Much to Nesteruk's credit, he does not set out to destroy Hawking's ideas, but to reformulate them in a way that is useful for contemplation of the Creator.

[10] Chapter six follows a similar procedure regarding theories of time. Nesteruk discusses two approaches to explaining time, that of Penrose and that of Prigogine.

[11] Chapter seven involves the role of human beings in the universe. Nesteruk reviews current discussion of the anthropic principle as an introduction to the notion that human beings enhypostatize the universe, operating as co-creators and providing it with unique being. Nesteruk discovers appropriate antinomies in both the many-worlds hypothesis and Wheeler's participatory anthropic principle. The chapter concludes, appropriately in a work of theology, with a discussion of the eschatological significance of the human-event.

[12] *Light from the East* is not an easy read. Nesteruk uses technical terminology from cosmology, Greek Orthodox theology, and dualistic philosophy. A reader of the book should be familiar with basic concepts in Platonic thought, have read some book on cosmology such as *A Brief History of Time*, and have at least as much knowledge of theology as one would get in, say, a class on the Christological controversies. Nesteruk does a good job of defining terms for those missing one or more of the disciplines he is using, but it helps to start with something.

[13] Much of the fun of this book, once one has swum through the surge of new concepts, is watching Nesteruk getting great minds in different disciplines to talk to each other. At the conference table Athanasius and Maximus the Confessor sit across from Immanuel Kant, Steven Hawking, and John Wheeler. While this conversation does not solve all problems in science and theology, at least Nesteruk has them negotiating with each other.

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