

Letters

features of our world as opposed to an absolute feature of the Universe” (chapter–page, 6–17). In some contexts, the laws of nature, such as the Newtonian laws of motion, lead to systems that are deterministic while in other contexts they do not. Thus, “determinism is a contextual feature of reality” (chapter–page, 6–11).

Finally, dualism is not required to explain complex phenomena that cannot be derived solely from fundamental laws. Rather, the conditions that emerge from the interaction of an ensemble of components provide the contexts in which the lawful behavior of nature produces those phenomena. Contextual emergence recognizes the top-down conditions that influence the bottom-up work of the laws of nature. Those conditions are not independent of but are related to the fundamental laws and particles of which the system is composed.

Bishop has laid the philosophical foundation in physics for the rich concept of contextual emergence. It is likely to bear much fruit in the future as it is applied to all the domains such as biology and sociology in which we describe our universe.

Reviewed by Randy Isaac, ASA Executive Director Emeritus, Topsfield, MA 01983. ♥

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Doubting Miller’s Doubt

Keith Miller’s article “Doubt and Faith in Science and Religion” (*PSCF* 70, no. 2 [2018]: 90–100) is informative, well written, and realistic. The author is well versed in the subject of science and religion. Unfortunately, I do have a problem with the basic concept of his article which is that “scientific inquiry and religion are founded on the acceptance of fundamentally unprovable assumptions.” However, many actual observations and actual experiences are not based on assumptions at all.

The following simple scientific inquiry is a typical example: I hold an object in my hand. I want to know if it floats in water. In order to find out I have to perform an experiment. I place the item in a pail filled with water. I observe that it sinks. My knowledge of the universe has been increased by performing this experiment. I now know that the item sinks in water. There is no doubt in the result of this experiment. This scientific inquiry was not founded on basic assumptions because it did not use any assumptions at all.

Scientific knowledge and religious knowledge based on actual observation and/or experience are not founded on assumptions and are therefore not subject to correction and change. Their explanations may be founded on unprovable assumptions and may be subject to correction and change.

Martin Huizinga
ASA Member

Miller Replies

In his letter responding to my article “Doubt and Faith in Science and Religion” (*PSCF* 70, no. 2 [2018]: 90–100), Martin Huizinga argues that many actual observations and experiences are not contingent on any assumptions. However, this comment illustrates one of the primary points that I made in the article. That is, there are fundamental unprovable assumptions that underlie all knowledge. These assumptions are often held without any conscious awareness. In using observations to construct our understanding of the natural world, we depend on the assumption that our senses provide true information about an external physical reality. In fact, we must assume that an objective physical reality that is accessible to us even exists. This is not trivial.

The equivalent in the pursuit of religious truth, is the assumption that there is a “supernatural” reality. For Christians, that assumption includes the existence of a personal transcendent creator God who is also immanent in the natural world. All our subsequent knowledge must start there.

Keith B. Miller
ASA Fellow

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Perspectives on Science and Christian Faith Three-Year Index

The three-year *PSCF* index will no longer be published in the journal. The last one was published in the December 2016 issue. An index for each issue is available online by clicking on “Dynamic directory of *PSCF* articles and tables of contents” found at <https://network.asa3.org/page/PSCF?>
