QUESTIONS OF TRUTH: Fifty-One Responses to Questions about God, Science, and Belief by John Polkinghorne and Nicholas Beale. Louisville, KY: Westminster John Knox Press, 2009. 180 pages. Paperback; \$16.95. ISBN: 9780664233518.

John Polkinghorne is an accomplished physicist and a theologian who is ordained in the Church of England. He has written extensively (26 books) on the topic of science and religion and was awarded the Templeton Prize in 2002, among many other accolades. Nicholas Beale is a social philosopher and a long-time collaborator with Polkinghorne. He also manages the website where Polkinghorne explains his views on science and faith and answers questions. This book, Questions of Truth, is a clear and concise set of responses to questions about God and science. Both authors offer responses which are identified by their initials, so a couple of perspectives are provided for several of the questions. Overall, this is a helpful, though brief, introduction on addressing questions at the intersection of science and faith. It could be useful to help prepare for dialogue with skeptics, especially scientists, engineers, or other intellectuals who are familiar with modern science.

In the foreword, Nobel Prizewinner Tony Hewish emphasizes Polkinghorne's view that science and religion are not in conflict, but are in fact complementary, and that both are vital for the deepest understanding of our place in the universe. He also points out that if aspects of particle physics, for example, are nonintuitive and defy rational common sense, then we should be prepared to accept that the most profound aspects of our existence may go beyond our common-sense intuitions as well. The first chapter (Leading Questions) sets the stage by summarizing nine fundamental issues that underlie the questions and answers of the subsequent chapters. The question-and-answer format is very effective in providing maximum apologetic impact in the areas of the concept and existence of God, the universe, evolution, evil, the human being, and religion. This is followed by a conclusion and three appendices on anthropic fine-tuning, the brain and mind, and evolution. The chapters are brief so at the end of each chapter is a helpful list of books for further studies. Additional helpful resources are also found after the appendices in the endnotes, glossary, and selected bibliography.

Readers should appreciate the humility reflected throughout this work. The authors do not hesitate to admit their ignorance when it comes to areas in which there is still much to learn. They are hopeful that new areas such as complexity theory have the potential to provide additional answers in the future. They suggest that the emergence of creative behavioral patterns in complex systems encourages the idea that there are holistic laws of nature, at present unknown, for which the key concept may have more to do with "active information" than with energy. Even so, the fact that the universe is rationally transparent to science and also turns out to be rationally beautiful argues for belief in God. The authors suggest that we have an ability to see

the deep order of the world—a world shot through with signs of mind, one might say—as being indeed a reflection of the truth that the mind of the Creator is revealed in this way. Science is then understood to be possible because the universe is a creation and we are creatures made in the image of the Creator.

Thus, they seem to be saying that the universe shows signs of being intelligently planned or engineered. As an engineer, I personally find this perspective to be intriguing and worthy of further study.

However, the authors are very careful to outline exactly what, and what does not, constitute legitimate scientific evidence for the existence of a transcendent mind. In the chapter on evolution, they are quick to appropriately emphasize the compatibility of evolutionary science and Christianity. As an engineer, it is exciting for me to consider how God is glorified by his ability to "make all things make themselves." It is even more exciting to study living systems, and in the spirit of biomimetics, begin to take baby steps in developing the technology of self-deploying and adaptive artificial systems. I would expect that many engineers relate to God at a deep level through this shared role as a creative problem solver. Thus I was somewhat troubled to come across the authors' suggestion that it is unfortunate that people think of God as a designer. They even assert that, "God is never spoken of as a 'designer' in the Bible." On the contrary, many texts could be cited, such as Psalm 139, that state that each of us was knit together by God in our mother's womb. Obviously, God's engineering capabilities and methods are well above and beyond ours, but we are made in his image and he reveals himself to us in ways that allow us to relate to him; this includes categories such as "designer." The strength of the evidence for a Christian worldview appears to be in the cumulative case. We should take care not to denigrate evidence that adds to that case, and that certain groups of people might find particularly compelling.

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## Letters

## **Neuroscience or Neuroscientism?**

I found Paul Moes' article, "Minding Emotions: The Embodied Nature of Emotional Self-Regulation," Kevin S. Seybold's article, "Biology of Spirituality," and D. Gareth Jones' article, "Peering into People's Brains: Neuroscience's Intrusion into Our Inner Sanctum" (*PSCF* 62, no. 2 [2010]: 75–87, 89–98, and 122–32 respectively), to be very controversial.

Given a limited space, I will only engage Moes' and Jones' articles based on points of philosophical interest. Both Moes and Jones appeal to developments in the mainstream neuroscience (among others) to talk about aspects of the human nature.

## Letters

First, Moes argues that nonreductive physicalism (NRP) is compatible with taking humans as agents who can engage in willful and responsible actions. Moreover, Moes argues that emotions (among other things) play a pertinent role in shaping the relational nature of human beings. So, for Moes, given the NRP model, top-down causation, i.e., from mental to physical, can be shown to be the case within the *closed physical system*. The question remains: what then is at stake in Moes' NRP model? Here, we need to know that the NRP model endorses three key claims: (a) ontological monism, (b) the irreducibility of the mental to the physical, and (c) the supervenience of the mental on the physical. Of all, (b) poses the greatest problem for the NRP model: If (b) is true, then it follows that mental states (e.g., emotions) are distinct states from brain states (e.g., brain activity or the firing of neurons). That means that mental states can be neither reducible nor identifiable with brain states, in that, unlike brain states which are purely physical, mental states are nonphysical states. In fact, in this sense, it is better to call Moes a property dualist rather than a nonreductive physicalist. However, my main objection is this: If Moes accepts (b) above, then his NRP model violates the causal closure principle, according to which all physical effects have sufficient physical causes. Thus, nonphysical states are excluded from the closed physical domain. If so, how then can Moes argue that mental causation/top-down causation is possible in the NRP model? Either Moes has to let go of the causal closure principle, in which case he can no longer be a physicalist, or he must identify mental states with brain states, in which case he can hardly be a nonreductive physicalist. But since the NRP model is based on purely philosophical commitment to physicalism, Moes' attempt to establish willful and responsible action by appealing to neuropsychology remains a nonstarter.

Second, Jones argues that neuroscience is making significant inroads into the human brain, which is believed to be the center of human thinking, intelligence, thoughts, and so forth. Since neuroscientists are gaining an insider's view of human brains via brain imaging techniques, they may soon map out the inner thoughts of people. The question remains: why should we take Jones' remarks seriously? The main problem with Jones' argument is his failure to distinguish the asymmetry between first-person perspective and third-person perspective. We all agree that neuroscience is great in giving us a thirdperson description of the characteristics of the human brain. But neuroscience is utterly incapable of giving us anything whatsoever of the first-person description of the phenomenal consciousness which necessarily belongs to a subject of experience, i.e., a person. It does not matter how sophisticated the brain imaging techniques are that neuroscientists use, the subjective character of the phenomenal consciousnesses (e.g., the hurtfulness of pain) or what it is like for a person to be in a pain state, cannot be captured by looking into people's brains, unless we get a first-hand report from the people themselves to learn about the content of their thoughts or the nature of their subjective experience. Contrary to Jones, we have no good reason to be afraid of advances in neuroscience when it comes to phenomenal consciousnesses. Put differently, though neuroscientists can certainly peer into people's physical brains, they can hardly peer into people's inner thought life. We can only sympathize with Jones' argument if we assume that our identity is grounded in the physical brain, the view I categorically reject, for reasons I cannot go into here.

So, both Moes and Jones failed to recognize the distinction that holds between the philosophical assumptions they each utilized to make their case on the one hand, and the empirical data they relied on to explain human nature on the other. Thus, they seem to have implicitly shifted gear from neuroscience to neuroscientism: that is, the proper knowledge of human nature is only attainable via neuroscience.

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## Reaction to September 2010 *PSCF* issue

I appreciated the September 2010 issue of *PSCF*. While I share the editor's concern about overemphasizing the origin debate (for the Christian community has more important issues to address), understanding creation's origins in the light of its destiny can affect our Christian walk. For once possessed and guided by the knowledge that everything came out of God and will return back into him (Rom. 11:36), we will respect every person either as a saint or as one on the way to sainthood.

Both Daniel C. Harlow and John R. Schneider view origins in the light of our destiny as they quote universalist texts (e.g., Rom. 8:18–32; 11:32–33; 1 Cor. 15:28; Eph. 1:10; Col. 1:20) and take them at face value. Most of us have been conditioned to read these texts in the light of the eternal damnation passages instead of reading the latter in the light of God's revealed purpose "to unite all things in him" (Eph. 1:10).

The above authors invite us to rethink original sin, and I agree. We have misread the Fall, because we failed to see how the two creation accounts are related. God revealed himself in two books: the Scriptures and nature. Nature resembles a novel as it is created (1) by the author's word, (2) within the author's mind, and (3) out of nothing. Moreover, such a narrative includes the creation of things, and of time and space in which events unfold. This intra-narrative time and space is distinct from the time in which the author lives. Creation week refers to God's own mode of existence, not to a part of the time he created.

The first creation account shows us an architect's drawing of a beautiful edifice with the surroundings perfectly landscaped, whereas the second one displays a cluttered construction site. The first account describes a novelist composing a narrative with a happy ending; the second one takes us into the first chapters of the novel in which things are going terribly wrong. The first account tells us how much time it took the author to finish his work; the second one takes us into the intra-narrative timeframe.

Adam and Eve were fallible. They were created for eternity but had failed to eat from the tree of life that represented the Lord who alone confers eternal life. As they were created in the image of God who does not take orders, they could hardly be expected to do so either.