

RESPONSE TO JOHN POLKINGHORNE

by *Wolfhart Pannenberg*

Abstract. In this statement, the author poses a number of questions that he believes John Polkinghorne left untouched in his response to Pannenberg's article "God as Spirit—and Natural Science." These questions include the role of philosophy in the interaction between theology and science, the concepts of space and time as prior to measurement, the relation between top-down and bottom-up thinking, and the concept of field.

Keywords: bottom-up thinking; field; holistic perspective; top-down thinking.

In the interest of the further development of the dialogue between science and theology, I welcome John Polkinghorne's agreeing that such discourse involves a metalevel of philosophical reflection. Of course, this does not make philosophy an "independent arbiter," since any philosophy of nature has to deal with the data discovered by science and is constrained by this requirement, which is also true of any theological interpretation of nature as product of God's creation. The relationship works also the other way, though. Bottom-up thinking and top-down thinking condition each other mutually, and the history of science provides ample evidence for this fact. It is not helpful to treat bottom-up and top-down as alternative strategies of thought, not to speak of attributing these alternatives to national differences. There have been empirically minded Germans as well as speculative thinkers in Britain.

Unfortunately, Polkinghorne does not offer any comment on my argument that the nature of space and time cannot be determined first by measurement, since to the contrary all measurement already presupposes the infinite *and* undivided whole of space (or time), an affirmation, by the

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way, that goes back to an English thinker, Samuel Clarke. Nor does Polkinghorne comment on my theological argument arising from biblical exegesis and connected with the historical rootage of the field concept in the ancient Stoic concept of *pneuma*. Furthermore, he does not seem to appreciate the function of field concepts in a holistic perspective of natural processes that might also account for the rise of complex forms of creatures with a degree of independent existence, a possibility that Michael Polanyi already contemplated. Could not a reformulated or extended field language prove useful in serving such a task?

The contribution of the theologian (or philosopher) in the dialogue with natural science might not be confined to taking notice of what already happened in science, but might also extend to exploring the horizon of further conceptual developments. There could be no genuine dialogue between scientists and theologians if only the theologians were expected to listen to the scientists, while these would have no reason to be concerned for what theology might have to say on the requirements of an interpretation of nature as God's creation.