

Emerging God: Theology for a complex universe

by [Philip Clayton](#) in the [January 13, 2004](#) issue

Theologians are paying attention to strange recommendations about theology from financier John Templeton—and not just because Templeton has the resources of a large foundation behind his ideas. Templeton is interested in “spiritual information,” or as Christians might express it, information about God and God’s actions in the world. His controversial idea is to obtain new spiritual information by linking theology much more closely to natural science. This strategy would lead us to concentrate on areas of the human intellectual quest where new information is becoming available, where knowledge is increasing. In our current situation that means looking to the sciences as allies in theological endeavors. How does this risky move influence speculation about the nature of God?

The Templeton program involves tracing out the speculative lines suggested by the most recent breakthroughs in natural science. Natural science, or its predecessor natural philosophy, has always served as a framework for conceiving God—or for dispensing with the concept of God, as the case may be. Consider a few examples. As Augustine realized, Plato’s forms needed to be located somewhere, and the mind of God was the natural place to put them. Thus Augustine could argue that, since any successful science requires the existence of forms, there must be a God to eternally think them. No God, no science.

Aristotelian science, dominant in the West for nearly 1,500 years, also required a God, at least according to St. Thomas’s masterful interpretation. Consider the famous doctrine of the “four causes.” From Aristotle to (roughly) Galileo, “to do science” meant to discover the four causes of a thing. The forms or “formal causes” require a divine mind in which they can be located. Assuming that matter, or the material cause of a thing, is not eternal, it must be created—and by God, of course. Efficient causes—the sculptor who transforms a block of marble into a statue of Athena—exist as separate from God; but since they are contingent, they too require God as their ultimate cause. The final cause or goal toward which everything

develops is God, for God must be the one who brings about the final outcome of the earthly process in accordance with the divine aims. Again, it seemed, if there's no God, there's no science.

Even as late as the 18th century, Isaac Newton offered a compelling line of speculation that appeared to lead from science to God. If it worked, the science of his day would still provide “spiritual information” about the nature of God. Newton's laws seemed to account for the interactions of all bodies in the universe. Yet, as Newton realized, applying these laws required an ultimate, unchanging framework of “absolute space” and “absolute time” within which bodies moved. This framework could be located only within God as the eternal object of God's thought—or at least it could exist only with the concurrence of God's will and as a reflection of the divine nature. So Newton's laws, the greatest insight in the history of physics, appeared to communicate something of the nature of God.

Connecting science or “natural philosophy” and theology became progressively more difficult as the modern era progressed, however. Beginning shortly after Newton and continuing until recently, most of the dominant scientific models left little room for the sort of theological connections we have been considering. The explosion of scientific knowledge, the predictive accuracy of mathematical physics, the emergence of evolutionary science based on random variation rather than on purpose, the controlling paradigm of reductionism, the dominance of materialist explanations and assumptions—all of these developments made science-based theological speculations difficult and, in the eyes of many, impossible. (For the story of the modern warfare between science and theology, see the works of John Hedley Brooke.)

But within the past few decades, we have seen an important new opening for science-based reflection on the nature of God. The concept of emergence, and with it the new field of emergence studies, has gathered momentum, giving rise to new speculation about God. What can we conclude about the nature of God based on these new sciences?

In one sense it's a truism to note that things emerge. Once there was no universe and then, after the Big Bang, there was an exploding world of stars and galaxies. Once the earth was unpopulated and later it was teeming with primitive life forms. Once there were apes living in trees and then there were Mozart, Einstein and Gandhi. But the new empirical studies of emergence move far beyond truisms. A

growing number of scientists and theorists of science are working to formulate fundamental laws that explain why cosmic evolution produces more and more complex things and behaviors, perhaps even by necessity. Especially significant for religionists, they are also arguing that the resulting sciences of emergence will break the stranglehold that reductionist explanations have had on science.

These scientists turn our attention to “the laws of becoming”: the inherent tendency toward an increase in complexity, self-organization, and the production of emergent wholes that are more than the sum of their parts. Perhaps, many suggest, it’s a basic rule or pattern of this universe that it gives rise to ever more complex states of affairs, ever new and different emergent realities. (See Stuart Kauffman’s *Investigations* and Harold Morowitz’s *The Emergence of Everything*.) Assume that these theorists are right and that it is an inherent feature of our universe to produce new types of entities and new levels of complexity. What might this fact tell us about the existence and the nature of God?

Traditional theology looked backward: it postulated God as the cause of all things. Emergentist theology looks forward: it postulates God as the goal toward which all things are heading. Moreover, if God stood at the beginning and designed a universe intended to produce Jesus, then God would have to use deterministic laws to reliably bring about the desired outcomes. Where the deterministic processes, on their own, are insufficient to produce a theologically acceptable world, God would have to intervene into the natural order, setting aside the original laws in order to bring about a different, nonlawlike outcome. Divine action then becomes the working of miracles, the breaking of laws; and God becomes, paradigmatically, the being whose nature and actions are opposed to nature. This opposition of God and nature has been disastrous.

Emergence, in contrast, suggests a very different model of the God-world relationship. In this model God sets in motion a process of ongoing creativity. The laws are not deterministic laws but “stochastic” or probabilistic: although regularities still exist, the exact outcomes are not determined in advance. More and more complex states of affairs arise in the course of natural history through an open-ended process. With the increase in complexity new entities emerge—the classical world out of the quantum world, molecules and chemical processes out of atomic structures, simple living organisms out of complex molecular structures. Then come complex multicellular organisms, societies of animals with new emergent properties at the ecosystem level, and, finally, conscious beings who create culture,

use symbolic language—and experience the first intimations of transcendence.

Conceived according to the model of emergence, God is no longer the cosmic lawgiver. The result is a far cry from Calvin's God, who must predestine all outcomes "before the foundation of the world." Instead, God guides the process of creativity. God and creatures together compose the melodies of the unfolding world, as it were, without preordaining the outcome. Emergentists note that this God must rejoice in the unfolding richness and variety, apparently willing to affirm the openness of the process and the uncertainty of particular outcomes. On this model, God's finite partners are the sum total of agents in the world, and all join in the process of creation. In Philip Hefner's beautiful phrase, we become "created co-creators" with God.

Finally, in the emergence model God does not sit impassively above the process, untouched and unchanged by the vicissitudes of cosmic history. Instead, there must be emergence within God as well. God is affected by the pain of creatures, is genuinely responsive to their calls, acquires experiences as a result of these interactions that were not present beforehand—all ideas familiar to readers of process theology (or Jürgen Moltmann's *The Crucified God*). Ultimately, is not such a picture of God closer to the biblical witness than the distant God-above-time of classical philosophical theism?

Emergence-based reflection on the nature of God challenges the separation between God and world. Panentheism, a major school of late-20th-century theology, argues that the world is more correctly understood as located within the divine being than as separate from it. (See *In Whom We Live and Move and Have Our Being*, edited by Arthur Peacocke and Philip Clayton.) Panentheists, who reflect on the scientific evidence and explore the intimate interdependence of God and world, conceive the world as "within" God and God as "in, with and under" all existing things (to adapt Martin Luther's language for the sacraments).

Does all this mean that the transcendence of God will be lost and the divine will be completely "immanentized"? Such was the claim of Samuel Alexander in *Space, Time and Deity*: as the world gradually develops more and more complex structures, it becomes more Godlike. In such a view, "divinity" is a property that the world develops in the course of emergent evolution. There is no longer a transcendent God, only an emerging, fully immanent one.

Some may wish to go this far, but emergence in the natural world does not require it. As a theological model, panentheism is responsive to the emergentist turn yet able to preserve a basic (and highly desirable) feature of traditional theology: the transcendence of God. For panentheists, the world is in God, but God is also more than the world. Fundamental differences in the natures of the two remain: God is necessary, the world contingent; God is eternal, the world limited in duration; God is infinite, the world finite; God is by nature morally perfect, the world—well, that one is obvious.

Then there are the social and political implications of emergentist panentheism—the dimension that for many is the strongest attraction for the position. The first implication is that a doctrine of God inspired by emerging scientific models is speculative rather than dogmatic, not fixed in stone but open to new information and revisions. It is a dialogue partner in the political process, not a final authority or arbiter of all truth. Moreover, a God who is intimately involved in the world, responsive to its joys and its suffering, can never be apathetic to the injustices in the world. If each of us is in some sense “within” the divine, then our striving for justice is itself part of the unfolding purposes of God.

There is no moral triumphalism here, however. The mystery of evil is pervasive: how can God allow evil actions when these now take place not “at the far ends of the earth” but within the divine being itself? No less decidedly, however, emergentist panentheism also testifies to the mystery of grace. Somehow the divine love is such that it even tolerates imperfection within itself—presumably because, due to some metaphysical necessity beyond our ken, it is not possible to create finite, limited agents without their engaging in actions that are imperfect, short-sighted, self-serving. For panentheists, the fact that evil exists in societal structures and in our very souls is not an invitation to quietism, but rather a clarion call to action. Since we live “in, with and under” the divine presence, it behooves us to do everything within our power to make the world around us reflect more clearly the divine source and presence to which it owes its very existence.