Journal of the American Academy of Religion, 2023, **91**, 542–560
https://doi.org/10.1093/jaarel/lfae021
Advance access publication 11 March 2024
Discussing the Discipline

Discussing the Discipline

The Theological Significance of the History of Science: John Templeton and the Promotion of Science and Religion

Peter N. Jordan*

ABSTRACT

This article examines the rationale behind philanthropist John Templeton's investment in the field of science and religion. His support stems in part from the conviction that historical developments in science are finally leading us to the right understanding of God's relationship to the created order. The older, mechanical picture of nature that science purportedly gave us implies that God is distant from nature, whereas more recent discoveries are revealing nature's complexity, elusiveness, intangibility, unpredictability, and creativity and imply God's intimate presence to, and involvement in, nature. This newer theological picture is consistent with a theological tradition to which Templeton had been exposed since childhood. Believing that science is finally uncovering theological truths about God and God's relationship to the world, Templeton sought to shape science and (especially) religion so that comparable breakthroughs might continue to flow in the future.

THE FIELD of science and religion has grown considerably over the past half a century. With its origins often dated to the publication of Ian Barbour's pioneering *Issues in Science and Religion* (1966), the academic side of the field has seen increasing numbers of chairs and academic posts, centers for research, programs for primarily graduate-level study, academic conferences, specialist journals, and fellowships of scholars (Barbour 1966; Peters 2017; Russell 2004). Academics working on science and religion issues can now be found in religious studies, theology, history, psychology, sociology, and elsewhere, and they increasingly attend to religious traditions other than Christianity and to geographical locations beyond the west. The more public-facing side of the field has also blossomed. New organizations geared toward nonspecialist audiences appear with considerable regularity, public debates are commonplace, and educational events

* Peter N. Jordan, Green Templeton College, University of Oxford, 43 Woodstock Road, Oxford OX2 6HG, United Kingdom; Faculty of Theology and Religion, University of Oxford, Gibson Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG, United Kingdom; Scholarship and Christianity in Oxford, 8 Norham Gardens, Oxford, OX2 6QB, United Kingdom. Email: peter.jordan@gtc.ox.ac.uk. This article was made possible through the support of a grant from Templeton World Charity Foundation, Inc. The opinions expressed in this article are those of the author and do not necessarily reflect the views of Templeton World Charity Foundation, Inc. The author thanks Jeff Dill, Matthew Whelan, Josh Reeves, Syman Stevens, and Alister McGrath for comments on earlier versions.

expressly designed to familiarize members of the public with science-religion issues are now routine around the world.

Among the scholarly disciplines that have contributed to the field's consolidation and growth during this period, history looms particularly large. The prominence of historians—especially historians of science—in the field can at least partly be explained by the ongoing cultural popularity of the conflict thesis, an ideological conviction asserting that science and religion have always been in conflict with each other in the past and will always be in conflict in the future (Russell 2000). Much of the work done by the field's historians has focused on empirically unearthing the errors and myths of historical narratives constructed around the idea of conflict—narratives like those created by Victorian-era figures John William Draper and Andrew Dickson White, who are often seen as originators of the conflict thesis (Moore 1979; Lindberg and Numbers 1986a; Brooke 1991; Brooke and Cantor 2000; Lindberg and Numbers 2003a; Numbers 2009a; Harrison 2015; Hardin et al., 2018; Ungureanu 2019). Thanks to their work, the prevailing consensus among scholars in the field today is that the history of the relations between science and religion is instead enormously complex and that conflict is at best only part of the story.[1]

Despite historians' efforts at myth-busting, the conflict thesis remains vexingly popular. An academic book dedicated to recent research on the thesis refers to it as "the idea that wouldn't die" (Hardin et al. 2018). That popularity, scholars recognize, is a function of the work the thesis does for those who espouse it; as Mark Noll and David Livingstone note, "The idea of perpetual warfare between science and religion serves the interests of partisans rather well" (Noll and Livingstone 2018, 2). The so-called New Atheists, for example, have used the conflict thesis to argue that religion has always impeded, and will always impede, the progress of science. In their hands the thesis justifies the vigilant policing of science's boundaries and keeping religion as far from science as possible.

With much of the historical study in science and religion focusing on dismantling narratives that assume conflict, little critical attention has been given to historical narratives that assume a perennially positive, harmonious, or integrated relationship between the two. Those narratives are just as susceptible to partisan use as those constructed around conflict, yet historians usually give them a free pass.

This article examines a key positive science and religion narrative, and the broader historical imagination, of a pivotal figure behind the rapid growth of the field of science and religion: the investor and philanthropist John Templeton (1912–2008). Templeton grew up in Tennessee before attending university in the 1930s, receiving his first degree in economics at Yale University and his second in law at the University of Oxford. He subsequently became an extraordinarily successful investor and investment counselor in New York and, from the 1960s onward, in the Bahamas. In his last few decades, Templeton devoted more and more time to writing and beginning in 1981 laid out his spiritual worldview and his hopes for the future in numerous journal articles and books. During that same period Templeton increasingly focused on philanthropy, creating three organizations—Templeton Religion Trust, John Templeton Foundation, and Templeton World Charity Foundation—to support future work in areas he cared about.

Templeton's philanthropies have poured vast sums into science and religion activities, and together they have done much to make the field what it is today (Clayton 2014).[2] For more than two decades, they have been known—and in some circles, criticized—for bringing science and religion into closer

[1] The "complexity thesis," as this view is sometimes called, is usually associated with Brooke 1991, in which it was first articulated. Brooke has since denied that complexity is a thesis: "Many times . . . I have insisted that complexity is a historical reality, not a thesis, and that instead of being placed alongside other theses, its primary role is to function as critique." (Brooke 2019, 235).

[2] In his brief account of the field's history, Clayton identifies the 1990s as a crucial decade in the field's expansion, one directly attributable to funding from Templeton's philanthropies (Clayton 2014, 434). The John Templeton Foundation website states that the Foundation's total giving as of the end of 2022 was $2.13 billion. No further breakdown is given for how that funding has been distributed across the Foundation's areas of interest, making it impossible to determine how much of it has gone toward the field of science and religion (John Templeton Foundation 2024).

proximity to one another and for promoting harmonious relations between them. As far back as 1997, for example, journalist David Wheeler wrote in *The Chronicle of Higher Education* that the John Templeton Foundation's view is that "scientific and religious viewpoints can be integrated" (Wheeler 1997, A15). A couple of years later in that same publication, physicist Lawrence Krauss criticized the John Templeton Foundation's decision that "science and religion should be connected more closely" (Krauss 1999, A88). Journalist Tony Carnes noted in 2005 in *Christianity Today* Templeton's "quest to bring science and religion closer together" (Carnes 2005, 88), journalist Nathan Schneider wrote in 2010 in *The Nation* of the Foundation's "mission to bring religion into conversation with science" (Schneider 2010, 12), and in 2015 in *The Public Eye* scholar John Weaver described the Foundation's desire to "create a rapprochement between science and religion" (Weaver 2015, 14).

Templeton's life and philanthropic interests have generated considerable journalistic commentary, but little sustained attention has been given to his ideas and to the specific reasons for his interest in science and religion. As we will see, one key reason for that interest is that Templeton saw scientific insights as theologically generative, with different scientific pictures of nature correlating with different theological understandings of God and God's relationship to the world. Fascinated by a diverse range of scientific breakthroughs occurring over the past few centuries, Templeton constructed a teleological history of science narrative from them, one in which those breakthroughs are made into a unified story of unidirectional change in scientists' thinking. To the two highpoints of that narrative—an older, mechanical, understanding of nature, and a newer view of nature as complex, mysterious, and incomplete—Templeton correlates specific theological positions: the older view with an image of God as distant and disconnected from nature, and the newer outlook with an image of God as intimately present to and involved in nature. Through these correlations, Templeton crafts a historical science and religion narrative that assumes not only that science and religion relate positively and can work constructively together but that religion must learn from and adapt to science and must reflect science's insights about the world. That narrative prompts him to push for future reforms in both science and religion so that new theological insights might continue to flow from science in the future.

Templeton presents this theological shift toward a view of God as more intimate to and involved in nature as the product of the scientific developments he identified. As it turns out, this latter theological position toward which the history of science purportedly points aligns with the picture of God taught by leading thinkers from Unity Christianity, a tradition to which Templeton had been exposed since childhood. Templeton's interest in science and religion, and his willingness to support the field, thus relies in part on a history of science whose trajectory vindicates the theological picture to which he was already committed and promises that future work will continue to supplement and refine that picture. Had Templeton not subscribed to a historical narrative that assured him that theological insights—especially ones consistent with his own understanding of God—would continue to be forthcoming, future investment in science and religion would likely have appeared far riskier to him that it did.

THE TRAJECTORY OF THE HISTORY OF SCIENCE

Templeton pieces together his understanding of the history of science from the writings of Arthur Peacocke, John Polkinghorne, Paul Davies, T. F. Torrance, Donald MacKay, and other commentators on science and religion matters.[3] His narrative about science's changing insights

[3] Science features prominently in four of Templeton's books: Templeton 1981 (revised and reissued as Templeton 1995 and Templeton 1998); Templeton and Herrmann 1989 (revised and reissued as Templeton and Herrmann 1998); Templeton and Herrmann 1994; and Templeton 2000 (a heavily revised version of Templeton 1981). Although he coauthored two of these books, reference throughout this article is made to the ideas contained in those publications as Templeton's. Templeton and Herrmann 1998 receives especially close attention here because of its strong historical focus.

into the nature of reality is structured around a disjunction between two reportedly distinct historical eras: a more distant past, the chronological span of which is left undefined, and the more recent past, roughly referring to the past century. Templeton depicts the former in terms of older worldviews that used to shape human thinking about nature. Those worldviews typically possessed three consistent features. The first is the idea that the universe possesses "constricted dimensions"—in other words, that it is very small (Templeton 1981, 27). The second is the idea that the universe looks a great deal like a machine. The third feature of the older view is the idea that the universe is a "fundamentally changeless and static whole" (Templeton 1981, 28). As soon as the universe came into existence, it was assumed that everything took a "form and aspect" that was "definitive and unchanging, constant and unalterable" (Templeton 1981, 28; Templeton and Herrmann 1998, 63). As a consequence, he says, "the machine worked, it was activated; it ran; but the machine itself never changed" (Templeton and Herrmann 1998, 63; Templeton 1981, 28).

For Templeton, the machine analogy is flawed and has several unhelpful connotations. It implies that things in the world possess only an extrinsic relationship to each other: "Men [*sic*] saw the world as a combination of separate, heterogeneous elements 'put together' extraneously with only a mechanical relationship to one another" (Templeton 1981, 27). The mechanical view of causality presumes the existence of "preconstituted" and "mutually independent" entities that became "conjoined artificially" when placed alongside one another (Templeton 1981, 28; Templeton and Herrmann 1998, 63). The machine analogy conveys a sense of self-sufficiency, as though nature is fully self-contained and operates according to the mechanical principles that guided the search for explanation in the first place. It also implies determinism. Thanks to early modern thinkers like Rene Descartes, Galileo Galilei, and Isaac Newton, Templeton claims that the idea that the universe operates like clockwork according to natural laws—laws in which "everything that occurred seemed resolvable into cause and effect, into action and reaction"—became widespread (Templeton and Herrmann 1998, 11). Templeton views their mechanical understanding of nature as implying an especially rigid form of determinism, one that raises expectations of nature's complete predictability. Their work, he says, also led many to believe that "reality" consists of the "description of phenomena in mechanistic terms" (Templeton and Herrmann 1998, 45). Last, the analogy seems to Templeton to imply a sense of completeness, as though a mechanical explanation can tell a person everything they can know about a system.

Templeton contrasts this outdated view with what he calls the "modern world picture," one given to us by recent research in the natural sciences (Templeton 1981, 28; Templeton and Herrmann 1998, 62). Around the turn of the twentieth century, he says, the mechanical view of nature began to be superseded by a wholly different understanding. Physicists of that era started to develop innovative theoretical approaches to natural phenomena, such as quantum theory and the theories of special and general relativity. These new theories turned out to better account for recently observed phenomena—radioactivity, X-rays, the photoelectric effect, and others—than older theories could. In Templeton's judgment, these new theories had the momentous consequence of calling "all of physical science's major concepts . . . into question" (Templeton and Herrmann 1998, 45). By helping physics to abandon "strict causality" and embrace randomness and unpredictability as genuine features of nature, they had the effect of "liberating . . . science from the Newtonian yoke" (Templeton and Herrmann 1998, 130). The invention of quantum mechanics in particular, Templeton asserts, "opened up vast new vistas, scientifically, philosophically, and theologically" (Templeton and Herrmann 1998, 154).

Other developments from science's recent history have also contributed to the new way we reportedly think about nature. These include the rise of a hierarchical understanding of nature in which different sciences (physics, chemistry, biology, ecology, etc.) are seen as operating at

different explanatory "levels."[4] The idea that new concepts emerge at each level, concepts that do not appear in the sciences that describe different levels, avoids the reductionist error of attempting to explain everything in terms of chemistry and physics (Templeton and Herrmann 1998, 55–59). Another recent breakthrough in science is the discovery that chance is constrained in crucial ways (Polkinghorne 1986, 50–55). The quantum revolution revealed the extent to which chance pervades the natural world, and as a result we are no longer deluded by the mistaken idea that there are no "gaps" in nature via which "spontaneous" and "unexpected" occurrences may occur (Templeton and Herrmann 1998, 132). The discovery of chance's preeminent role—chance understood in what Templeton calls a "technical" sense, as indicative of a lack of knowledge of causal connections between events—does not however mean that scientists can now claim that *everything* is "pure chance, absolutely free but blind," as the French biochemist Jacques Monod once put it (Templeton and Herrmann 1998, 60).[5] Scientists are instead continually uncovering an interplay between chance and necessity. Without the former, new things would not arise; without the latter, those new things would "vanish away as soon as they were made" (Templeton and Herrmann 1998, 59).[6] In evolution, the self-stabilization of the genome, dissipative structures, the emergence of life, and numerous other settings, scientists are finding that older theories—especially those put forward by people like Monod, who wanted to undermine religion—overemphasize the extent of nature's randomness. They now insist that there almost invariably exist "ordering and structuring forces" throughout the universe that constrain chance in some manner (Templeton and Herrmann 1998, 65).[7] Templeton deduces from these insights that "random chance events in the evolution of our cosmos . . . seem remarkably constrained to yield some useful and often astonishing products" (Templeton and Herrmann 1998, 68–69).

Together these developments in the history of science lead Templeton to conclude that science is moving in a very clear direction. Rather than that history consisting of countless changes toward divergent destinations within a disparate array of areas of investigation, Templeton instead reads it as a unified series of changes heading along a single trajectory. In doing so he mirrors an earlier approach taken by Arthur Peacocke, who similarly had compared "classical" and "contemporary" scientific worldviews in terms of a similar then/now structure (Peacocke 1979, 61–63).

At times, Templeton characterizes the historical trajectory or pattern of change in science that he observes through comments on the kind of science we now practice. Contemporary science, he asserts, is becoming more open-ended and exploratory, and science "as a tightly closed, self-sufficient system is gone. The possibilities for question and explanation are almost limitless" (Templeton and Herrmann 1998, 55). He similarly claims that "something has been happening" in recent history: "Science appears to be leading us back to a profound respect and an expansive attitude toward nature" (Templeton and Herrmann 1998, 21).

At other times Templeton depicts the historical trajectory that he detects in terms of those changes contemporary science has wrought in how we now understand nature itself. The general tendency in our knowledge of nature, he claims, has been "toward seeing increasing complexity and multiplying mystery within the entire body of science" (Templeton and Herrmann 1998, 205). Templeton similarly states that things that started out as "tangible"—here he includes "matter, energy, space, and time"—now seem "to bear some of the mystery of an illusion"

[4] Arthur Peacocke discusses the notion of levels of reality in Peacocke 1979, 113–19.

[5] Templeton and Herrmann are quoting Monod via Polkinghorne 1984. Templeton and Herrmann borrow the idea of technical and popular senses of chance from MacKay 1974.

[6] Templeton and Herrmann are again quoting Polkinghorne 1984.

[7] These developments are surveyed in Templeton and Herrmann 1998, 62–69, 132–38.

(Templeton and Herrmann 1998, 206).[8] Science is now purportedly discovering that "the things we see, hear, and touch are only appearances," a development he takes as a sign that we are now entering what he calls the spiritual phase of history (Templeton and Herrmann 1998, 37). Templeton indicates this direction of the history of science by identifying three corresponding elements of the modern perspective that contrast with those of the earlier, older, view of nature. The older view regarded the universe as very small, but today we know that the universe has "gigantic dimensions" and an "amazing structure" (Templeton and Herrmann 1998, 62).[9] In the outdated view of the universe, nature possessed a mechanistic structure. In the modern perspective, by contrast, entities are "continuously and intrinsically interconnected," and there is what he calls "reciprocal cohesion of all entities" within it (Templeton and Herrmann 1998, 62; Templeton 1981, 27–28). The world that modern science has delivered to us, Templeton says, is not a machine but a "mighty organic whole," one in which "every single thing is related to everything else" (Templeton and Herrmann 1998, 63; Templeton 1981, 28). The universe, so it turns out, is an organism "building itself up from within" (Templeton and Herrmann 1998, 63; Templeton 1981, 28). Finally, against the older outlook that saw the universe as changeless and static, in the modern outlook the universe is an "enormous historical process," or what Templeton calls an "evolutionary happening" (Templeton and Herrmann 1998, 63). It is a dynamic and ever-changing place, one whose history of change goes billions of years into the past and which is "moving on into an incalculable future" (Templeton and Herrmann 1998, 63). Templeton sums up these three elements of the modern world view as follows: "We live in a universe gigantic in its dimensions, building itself up organically as a cohesive whole, and impelled by an inner dynamic and energy toward its completion" (Templeton 1981, 28).

The following passage evokes the profound overall historical change Templeton believes these and other recent developments in science have brought about in our thinking:

> The tight little mechanisms, the clockwork images, the strict following of cause by effect . . . these and many more of the most familiar components of scientism are fading fast. We find an exciting world in dynamic flux, an unexpected universe whose mechanisms are ever more baffling and staggering in their beauty and complexity, where predictability is uncertain instead of deterministic, where matter and energy are interchangeable, and where evolutionary change occurs by leaps and bounds that defy mechanistically simple explanation. (Templeton and Herrmann 1998, 2)

Here and elsewhere Templeton interprets the scientific developments he recounts in his history as scientists' growing recognition of numerous interrelated and previously unrecognized features of nature: its complexity, mystery, incompleteness, elusiveness, intangibility, unpredictability, hierarchical structure, interconnection, and creativity.[10] The "deeper we probe into the nature of things," Templeton and Herrmann write in the opening chapter of *Is God the Only Reality?*, the "more complex and mysterious they become" (Templeton and Herrmann 1994, 8). In Templeton's judgment this shift from old to new represents a "revolution . . . in human consciousness," one with which we are still coming to terms (Templeton 1981, 29).[11] Thanks to this new way of understanding the world and this new way of doing science, the world is now "revealed" to us "in a totally new guise" (Templeton 1981, 28).

[8] Templeton and Herrmann are here drawing on the work of Loren Eisley (1984).

[9] See also Templeton 1981, 27, and Templeton 2000, 91, where he writes instead of its "enormous structure."

[10] Peacocke lists a comparable range of qualities in his depiction of the "scientific world-view today" (Peacocke 1979, 55–63). Polkinghorne similarly depicts ten qualities (elusive; intelligible; problematic; surprising; chance and necessity; big; tightly-knit; futility; complete; incomplete) that reflect the current "scientific view" of the world (Polkinghorne 1986, 43–61).

[11] Paul Davies, on whose work Templeton relies, writes of the "major revolution in human thought" that has occurred thanks to the new ideas that have "erupted" within the scientific community (Davies 1983, vii).

Templeton's language of revelation here is not incidental. What science finally is revealing to us by uncovering these previously unrecognized features, he suggests, is the created order's utter dependence on God, and God's presence in and intimate involvement in the world. In other words, our new understanding of things, courtesy of the modern natural sciences, is forcing us to rethink how we conceive of God and God's relationship to the world.

THE THEOLOGICAL YIELD OF THE HISTORY OF SCIENCE

Theologically speaking, Templeton regards the older perspective on nature (the picture in which mechanism and determinism reigned supreme) as correlating with a view of God who is separate from and disconnected from the world—that is, with a broadly deistic understanding of God.[12] When the universe was seen as a machine or as operating like a clock, God, Templeton claims, was perceived as only a "clockmaker" or "occasional adjuster" of the machine, a view that made God "largely distant from his creation" (Templeton and Herrmann 1998, 143). By contrast, the modern outlook that science is giving us purportedly entails an understanding of God as much more immediately involved in the complex, multi-leveled, and unpredictable order that God creates and upholds. Instead of justifying an image of God as a detached machine-keeper, the new understanding of nature ostensibly lends credence to ways of seeing God's relationship to creation that emphasize a "closer association [of God] with the material world" than previous ones (Templeton and Herrmann 1998, 14). Any viable model of how we think about this relationship must therefore enable us to "intimately identify the awesome universe in its every shape and manifestation with the God who is limitless and timeless" (Templeton and Herrmann 1998, 14). According to this new understanding of nature, divine action similarly is not something that once set the clock in motion but then ceased. Rather, God's activity must be imagined as "far more open-ended and immediate" than the clockwork image implies or allows (Templeton and Herrmann 1998, 21). In his writings Templeton surveys several relatively recent theological models that he thinks correlate well with what scientists are continuing to discover about the world. These include physicist Donald MacKay's notion of God as the cosmic artist (Templeton and Herrmann 1998, 22–23), astronomer James Jeans's idea of the universe as a "great thought" (Templeton and Herrmann 1998, 32–33), and physicist Rustom Roy's "scientifically elaborated panentheism" (Templeton and Herrmann 1998, 28–32). These and other similar models provide a "rich variety of ways" for understanding the relationship between "Nature and its Creator and Sustainer" (Templeton and Herrmann 1998, 21).

Other specific recent developments contributing to the shift from the older to the newer outlook on nature have also prompted new theological insights. Scientists' gradual realization of the pervasiveness of constrained chance, for example, is in Templeton's judgment "consistent" with the view that "Divinity" is the "fundamental reality" who "evidences intimate concern for his creatures yet encourages the operation of free will in his Creation" (Templeton and Herrmann 1998, 69). Templeton also asserts that the interplay of chance and necessity or law is "consistent with the character of God as both loving and faithful" (Templeton and Herrmann 1994, 95). This arrangement of the world means that there is considerable space for God to act in it, space that is overlooked in the clockwork picture: "here," Templeton claims, "is a world in which novelty and order are intertwined. It is the kind of open-ended world in which a God who is both

[12] Templeton himself only deploys the term "deism" once, writing of "inherited systems of thought, whether they be polytheistic, deistic, theistic, monotheistic, pantheistic, panentheistic or even older concepts" (Templeton 2000, 10). The term appears in three places in which he provides lengthy direct quotations from other authors. In the first and second appearances, the term is associated with notions of a "completely transcendent God" and of God having "no effective interaction with the world" (Templeton and Herrmann 1998, 21). In the third appearance, God is "so transcendently related to the universe" that he is "deistically detached from it in his eternal impassibility and immutability" (Templeton and Herrmann 1998, 128).

loving and faithful can take an active role" (Templeton and Herrmann 1994, 162). Templeton sees comparable theological insights flowing from scientists' growing recognition of nature's complexity and its dependence on unseen levels of order. Across every scientific field, he claims, scientists are finding that the complexity of their descriptions of nature is increasing. Templeton takes this as a sign that our "familiar terms" of matter, energy, space, and time are potentially "manifestations of a more fundamental order" (Templeton and Herrmann 1998, 208). That underlying order, he says, when looked at in the "ultimate" sense, is "the immanent, active participation of the Creator, 'who holds in being the whole universe' as part of his own ultimate reality" (Templeton and Herrmann 1998, 208).[13] Chance occurrences have similarly "taken on" a "deep theological meaning," insofar as they should "properly be seen as the expressed will of the Creator of a higher kind of order" (Templeton and Herrmann 1998, 144).

In Templeton's hands, then, the recent natural science discoveries that he assembles into his historical narrative belong together because of the pattern of historical change which he believes they together create, and which they each individually reflect. That pattern is one of science's growing recognition of nature's incompleteness, lack of self-sufficiency, mysteriousness, and interconnection. For the theologically minded Templeton, this history of scientific change is simultaneously a story of mounting testimony to God's ongoing presence and dynamic activity in and through nature—that is, it is a story of accumulating signs of nature's dependence on something that transcends it, yet that is necessary for its ongoing operation. It is in recognition of this theological meaning of the history of science that Templeton can write near the end of *The God Who Would Be Known* that the "multiplied mysteries that confront us in the universe, in the subatomic world, and in ourselves should bring us, not to a posture of arrogance and pride, but rather to our knees before the great God of the universe, who has spoken this vast and fascinating cosmos into being" (Templeton and Herrmann 1998, 234).

TEMPLETON'S THEOLOGY

Science alone, Templeton claims, is responsible for the significant shift in both scientific and theological worldviews that his history traces. "Evidence" of these developments, he claims, is "not based on study of the Bible or other ancient scriptures, but on recent discoveries of modern science" (Templeton and Herrmann 1998, 37). Although Templeton uses science to inform and explain the theological change he lays out, the content of the theological picture he correlates with the newer scientific outlook turns out to be consistent with the teachings of a theological tradition to which he was exposed as a child and with which he continued to engage throughout his life. Given that those theological commitments predate his serious engagement with scientists and scientific research, Templeton's receptivity to the scientific developments from which he fashions his historical narrative, and his interpretation of that history in the specific theological directions in which he takes it, seem to have been encouraged by those very commitments. Put slightly differently, the science and religion narrative that Templeton crafts likely was attractive to him because its theological destination is consistent with the theology to which he was already committed.

Templeton names the theological tradition that most shaped his thinking throughout his life in the introduction of his spiritual anthology, *Riches for the Mind and Spirit*. There he writes that although he was a lifelong member of the Presbyterian church, his mother "imbued" him with "something of the spiritual philosophy of the Unity School of Christianity" (Templeton 2006, ix–x). According to one of his biographers, Templeton's mother, Vella, "created a home environment that focused on the Unity School" and had a "strong influence" on her son's "spiritual

[13] Templeton here is quoting Donald MacKay's paraphrase of Hebrews 1:3.

development" (Proctor and Phillips 2012, 132). Unity's impact, Templeton tells his readers, was solidified through his reading of its publications for more than sixty years, beginning when he started reading *Weekly Unity* at around age nine (Templeton 2006, ix–x; Proctor and Phillips 2012, 136).

A key Unity teaching that facilitated Templeton's engagement with selected scientific breakthroughs is its view of the relationship between God and the created order. Templeton's understanding of Unity's account of that relationship, and the Unity thinkers on whom he depended for it, is visible in his discussion of matter-spirit relations in *The Humble Approach*, written before his lengthy writing collaboration with the scientist Robert Herrmann (Herrmann 2013, 33–37). One of the problems with the mechanical view of nature, he writes there, is that it correlates with a deistic view that emphasizes God's transcendence at the expense of God's immanence and thus views God as "utterly differentiated from His creations, and sometimes as quite detached from them" (Templeton 1981, 20; Templeton 2000, 84). Deism separates matter and spirit to such an extent that matter gains an unacceptable degree of ontological independence from spirit. In doing so it prevents God from being viewed as the "creative Ground and Sustainer of all that is" (Templeton 1981, 21).

Instead of thinking of matter and energy as "created by God but as now utterly independent of God," Templeton believes we should instead view matter as completely dependent on spirit (Templeton 1981, 21). Pantheism is closer to the mark in this regard, insofar as it serves the "good purpose" of insisting on "the close intimacy of spirit and matter" (Templeton 1981, 22). But Templeton is critical of pantheism because it makes God identical to nature and restricts God to "visible, material things" (Templeton 1981, 21). Wanting neither to separate God entirely from the created order nor to equate God with the created order, Templeton sees Unity thinkers as rightly insisting on a profound and mutual "indwelling" of human beings and God, and hence of spirit and matter (Templeton 1981, 22; Templeton 2000, 86). That indwelling is reflected in a saying he traces to Emanuel Swedenborg, whose influence on Unity (and New Thought more broadly) was profound: "God is all of me: and I am a little part of him" (Templeton 1981, 22; Templeton 2000, 86).[14] Through such notions, Unity thinkers purportedly capture the "interdependent relationship" between God and humanity, and the "mutual unity" between God and the created order, that Templeton believes to exist (Templeton 1981, 22). This interdependence, though mutual, gives precedence to spirit, as Templeton's discussion of Unity's concept of manifestation makes clear.[15] Naming several key figures within Unity and the broader New Thought movement to which it belongs, Templeton asserts that Mary Baker Eddy, Charles Fillmore, and Ernest Holmes all taught that matter "may be only an outward manifestation of divine thought, and that the creative spirit called God is the only reality" (Templeton 1981, 20; Templeton 2000, 85). Matter, as contingent and hence dependent on God, is an "out-picturing" of the "ongoing creative reality they call God" (Proctor and Phillips 2012, 135). Rather than an independent reality standing alongside God, matter is completely reliant on God for its creation and ongoing existence, and as such its reality is of a lower metaphysical order.

Templeton's allegiance to Unity's views about the relations between matter and spirit are visible in passages like the following, which comes from *The Humble Approach*:

> If God is infinite, then it follows that all other reality is dependent on Him and cannot exist apart from Him. Matter and energy may be only contingent manifestations of God. Space and time may be only manifestations of God. . . . Matter and energy may be only creaturely manifestations of the universal Creator. While God does not need the universe to be God, the

[14] Templeton espoused this idea publicly at least as early as 1975 (Templeton 1975).
[15] Templeton employed the idea of manifestation at least as early as 1976 (Templeton 1976).

> universe may need to be unceasingly supported and enfolded in His presence and power to be what it is. Maybe it can only exist in and through God. (Templeton 1981, 21)

Here and in other comparable passages, Templeton maintains that all created things are inseparable from God because they mysteriously dwell in or are embedded in God.[16] So deep is that indwelling that it calls into question the extent to which the created order is a genuine reality of its own. Consequently, Templeton (following Eddy, Fillmore, and Holmes) repeatedly wonders whether God might be the only reality (Templeton and Herrmann 1994, 142, 160, 163).

We have already seen how Templeton viewed the history of science as a story of scientists' growing recognition of (among other things) nature's mysteriousness and intangibility. His constant refrain is that scientific developments are increasingly pointing us toward God's immanence and active presence in nature. In doing so, Templeton is drawing theological conclusions from these developments that correspond directly with Unity's theological outlook. Unity's teachings about the contingency and dependency of the created order would therefore seem to have encouraged him to construct science's history in this way.

A good example of Unity's influence on Templeton in this regard is the lesson he draws from recent scientific discoveries about matter's intangibility. The theological significance of the idea of tangibility is conveyed by Unity theologian Lowell Fillmore, whom Templeton quotes as saying: "Remember that although God's principles are spirit and cannot be seen, they are more real than tangible things. . . . His invisible principles uphold that which is visible to us" (Templeton 1981, 21–22; Templeton 2000, 86). By "tangible things" Fillmore is referring to things made of matter, which in his view (as for other Unity thinkers) are dependent on another level of reality for their existence and possess a lower degree of metaphysical reality than spirit. Templeton connects this theological interpretation of matter's (in)tangibility to the purported historical growth in scientists' recognition of the physical intangibility of matter in statements like the following: "Physical reality seems less and less tangible. Perhaps in the end it may only serve to point us to another awe-inspiring transcendent and immanent Reality" (Templeton and Herrmann 1994, 37).[17] Already convinced by Unity's teachings that matter is metaphysically less real than spirit, Templeton is primed to be receptive to scientific discoveries that seem to empirically underscore matter's elusiveness and intangibility, as they confirm Unity's understanding of reality. As presented in his writings, though, it is those empirical insights that lead to the theological teaching, rather than the other way around.[18]

At the same time as it encouraged him to draw Unity-shaped theological conclusions from recent scientific developments and therefore to promote a history of science whose overall trajectory vindicated his theological convictions, Templeton's emphasis on God's immanent presence to the created order also opened him to theological claims being made by others who were similarly exploring science's theological implications. Many different authors helped Templeton to articulate the problematic positions he wanted to steer clear of and to identify alternatives he could embrace. Rather than coming up with his own God-world models, for example, Templeton happily promoted those that MacKay, Jeans, Roy, and others had already developed. Templeton's theological intuitions about divine immanence and involvement also appear to have opened him to contemporary science and religion scholars like Arthur Peacocke and John Polkinghorne. Peacocke sought to avoid the same theological extremes (deism and pantheism) as Templeton did (Templeton and Herrmann 1998, 21), and both Peacocke and Polkinghorne were searching

[16] One of Templeton's favorite ways of conveying this idea is through the image of created entities as akin to waves in an ocean. See, for example, Templeton 1981, 36, 166; Templeton 2000, 16, 176.

[17] Similar ideas are conveyed at Templeton and Herrmann 1994, 9, 143–44. See also Templeton and Herrmann 1998, 205.

[18] John Hedley Brooke and Geoffrey Cantor have written of "key words" that can "mediate between scientific and religious beliefs." The concept of tangibility seems to play such a role for Templeton (Brooke and Cantor 2000, 16).

for new ways of thinking about God in relation to the created order. His frequent citation of their writings, and his invitation to them to participate in various philanthropy-related activities, suggest that Templeton found them to be kindred theological spirits.[19]

COSMIC HISTORY

The preceding sections have focused on Templeton's approach to changes within science that occurred over a timescale on the order of hundreds of years. Templeton's historical imagination also stretched to changes of other kinds, and to ones taking place over much, much longer timescales. In fact, his centuries-long history of science and religion just described is located inside an overarching and expansive billion-year-long narrative of the emergence and development of the entire cosmos and the appearance of human beings within it.[20] That cosmic-level story of history's movement through successive phases or eras is vital for Templeton for at least two reasons. First, it illustrates the dynamic (rather than static) nature of the universe's own history and thereby confirms one of the main pillars of his science and religion narrative. And second, it enables him to reinforce another claim made through his history of science and religion: that God is intimately involved in nature, even if we have not always recognized that fact.

Templeton's cosmic-level history begins with the emergence of the universe long ago at the Big Bang (Templeton and Herrmann 1998, 36).[21] Following a narrative proposed by the Jesuit paleontologist Pierre Teilhard de Chardin, Templeton asserts that in the first phase of its history, known as the geosphere, nothing existed in the cosmos except minerals (Templeton 1981, 30–31). When life came on the scene, the universe entered the biosphere. This second phase of history constitutes the most recent 20 percent of the total duration of the universe's existence (Templeton 1981, 31; Templeton and Herrmann 1998, 36). The third phase began when this "sphere of life" was enveloped by the "sphere of intellect," or noosphere, which now surrounds our planet (Templeton 1981, 31; Templeton and Herrmann 1998, 36). Intellect allegedly has been present for only the most recent one-millionth of total cosmic history. So unexpected and powerful is the human mind that emerged with the sphere of intellect that what happens next is in Templeton's view anyone's guess. His suspicion is that a new period of history has already begun, one he refers to as the sphere of the spirit (Templeton 1981, 165).

Human evolution constitutes a small yet critical part of this cosmic story. Our evolutionary past involved two key physical changes, both of which Templeton refers to as "leaps upward" (Templeton and Herrmann 1998, 3).[22] The first occurred approximately two million years ago, when our ancestors began walking upright. The second was the emergence of our predecessors' large brains approximately 150,000 years ago. Their brain development marked the "advent of cultural humankind" and corresponded to a period of rapid cultural development during the noosphere (Templeton and Herrmann 1998, 4). The innovations that ensued—planning, toolmaking, symbolic communication, artistry, architecture, and the acceleration of learning that culminated in modern science—endure to this day (Templeton and Herrmann 1998, 5). Alongside this account of our physical evolution is a story of human spiritual development.

[19] Peacocke and Polkinghorne both sat on the John Templeton Foundation's board of advisors between 2000 and 2003, were trustees and members of that Foundation during the same period, and were winners of the Templeton Prize in consecutive years (Herrmann 2004, 231–62).

[20] Templeton adopted this narrative from the Jesuit palaeontologist Pierre Teilhard de Chardin (Templeton 1981, 30–31). Templeton repeatedly drew on Chardin's ideas in his writings. For recent criticisms of Chardin's cosmic theology, see Slattery 2017.

[21] Templeton regularly discusses the Big Bang in his writings and at times recounts popularized versions of the early history of the cosmos by authors like Polkinghorne and Timothy Ferris.

[22] Templeton's treatment of human evolutionary history is influenced by the work of anthropologist Loren Eiseley and neuroscientist John Eccles, and his thinking in terms of breakthroughs or key developments resonates with the work of Gerald Hawkins.

Templeton sees evidence of our ancestors' nascent spiritual orientation in their growing concern with more than just their immediate physical and material needs. Neanderthals' care for their sick, burial of their dead, and artistic efforts, for example, suggest to Templeton that even in this relatively early stage in the history of the human species, mundane and everyday happenings could be interrupted by moments of "deeper meaning" (Templeton and Herrmann 1998, 5). These early humans represent something new on the cosmic scene: "It was as though some unseen force was unleashed with the advent of the human—the toolmaker, the burier of the dead" (Templeton and Herrmann 1998, 15). At this point in history—with the advent of what Templeton calls "spiritual humankind"—creatures emerged whose attributes "allow the greatest harmony with each other and the greatest communion with the majestic and all-powerful Creator, into whose eternal purposes we fit" (Templeton and Herrmann 1998, 3). This new spiritual orientation is in Templeton's view a key indicator that the fourth, spiritual, phase of history has dawned.

In its depiction of history as progressing through a series of stages, Templeton's cosmic narrative foregrounds God's immanent involvement in nature in ways that confirm Unity's teachings. The logic of that connection is straightforward. History's stages indicate that the universe is moving in a specific direction. Reality, Templeton writes, "is a continuing creative process in an unmistakable direction, 'from the simple to the complex, from the small to the large, from the isolated individual entities to combinations and integrated systems, and to community'" (Templeton 1981, 63; Templeton 2000, 49).[23] This continuous growth in complexity represents a "unidirectional" evolutionary process through which creatures of ever-increasing sophistication and intricacy have emerged (Templeton and Herrmann 1998, 2).[24] That directionality prompts Templeton to invoke the idea of a plan. By looking at the whole canvas of evolutionary history, we purportedly can "begin to discern a purpose or plan—an ultimate meaning—in the evolutionary creative process" (Templeton and Herrmann 1998, 2–3).[25] By suggesting that history may be planned, Templeton can claim the need for a divine planner. The idea of a cosmic planner appears frequently in his writings, such as when he claims that one of our tasks is to be sufficiently open and humble—another common theme in his writings—so that we might recognize "the glorious plan and the enormity of the planner" (Templeton and Herrmann 1998, 16). Templeton similarly uses his cosmic history to promote the idea of a divine guide, writing, for example, of how the "remarkable ordering of the universe" makes it "not difficult to see . . . the hand of a Designer, guiding within narrow limits the direction, magnitude, and timing of each event of the universe, from that staggering explosion billions of years ago to the present" (Templeton and Herrmann 1998, 77). In these ways, the long-term evolutionary development of the cosmos testifies to God's active involvement in nature throughout its history.

Within this divinely planned and guided history, it is not only the appearance of spiritually inclined human beings that confirms the inauguration of the fourth, spiritual, era. As we began to see earlier, science purportedly confirms it too. Through its discoveries, Templeton asserts, the sphere of the spirit is "expanding exponentially all across the scientific landscape" (Templeton and Herrmann 1998, 14). Recent "developments in science," he claims elsewhere, "serve to signal that a new order—the sphere of the spirit—is being recognized" (Templeton and Herrmann 1998, 15). Templeton likewise contends that our exploration of the universe through science represents "a new journey of spiritual discovery, a voyage into the sphere of the spirit" (Templeton and Herrmann 1998, 15). Templeton's argument here seems to be that

[23] Templeton is here citing Harold Schilling.

[24] For other comments on the directionality of these processes, see Templeton and Herrmann 1994, 110, 113, 162; Templeton and Herrmann 1998, 59.

[25] On the notion of a divine plan, see also (among many others) Templeton 1981, 2, 3, 43, 57, 101, 106; Templeton and Herrmann 1998, 65, 89, 171, 194, 200, 237.

science signals our arrival in the spiritual phase of history because its recent discoveries purportedly confirm the intimate presence of God in the manner described earlier. We know we are in the fourth era of history, Templeton is saying, because we human beings—the most complex creatures to have emerged thus far in the evolutionary history of the cosmos—have disabused ourselves of the view that the universe is mechanical and machine-like and have finally begun to recognize the truly spiritual nature of all things.

THE FUTURES OF SCIENCE AND RELIGION

According to the strand of Templeton's thinking that we have been tracing, scientists have led us away from an older, mechanical picture of nature toward an understanding of the universe in which nature is more dynamic and less predictable than previously thought. This revolution in our thinking about nature necessitates a revolution in our thinking about God and God's relationship to the created order. The new theological insights Templeton draws from these recent developments in science accord with ideas he inherited early in life from a theological tradition that loomed large during his upbringing.

Templeton's thinking about the theological possibilities inherent to science directly informed his efforts to shape science and religion in the future. Connections between the two are visible on at least two levels. First, Templeton published a wide range of books on theological and spiritual issues, of which his four science-focused books are part. Individually and together these books represent a subtle argument for his Unity-influenced theological outlook. They also depict activities that Templeton hoped would increase the likelihood that people in the future would continue to draw out the theological implications of new scientific developments. Second, Templeton created his three philanthropic organizations, some of whose goals are consistent with the strand of his thinking we have been exploring. As the purpose clause of the John Templeton Foundation charter indicates, one of that Foundation's main funding areas, known as "Humility-in-Theology," is guided in large part by his science-focused books, suggesting that the activities described in those books should inform what the Foundation supports under the Humility-in-Theology banner (Templeton 2000, 180–81).[26] Another of its stated priorities is "supporting the publication and dissemination throughout the world of the religious teachings of the Unity School of Christianity of Unity Village, the Association of Unity Churches and of closely similar organizations" (Templeton 2000, 184). That emphasis similarly indicates Templeton's desire that his philanthropies facilitate the spread of those theological ideas that had prompted his own receptivity to science and that had enabled him to view it as theologically generative.

In terms of activities that might best facilitate the future harvesting of science for its theological fruit, Templeton believed that at least two broad changes in science and in religion needed to occur. One is that religious persons need to be encouraged to pay more attention to science and to take it more seriously. Rapid advances in science, he says, "prove" the need for new theologies (Templeton 1981, 31). Among the most exciting ways that theology can make progress, he claims, is through its creative partnership with science: "Perhaps both scientists and theologians should pool their humility and explore together the distant corners of the universe" (Templeton 1981, 51). An abiding problem of contemporary religions and religious authorities, however, is their failure to understand and grapple with contemporary scientific developments. Templeton has the "theological establishment"—professional theologians who seem to know little about contemporary science and who remain "entrenched" in a "conservative rigidity"—firmly in his

[26] All four of these books are named in the purpose clause of the John Templeton Foundation's charter for use in "clarification of the term Humility-in-Theology," the advancement of which constitutes one of the main activities of that Foundation.

sights here. "Few seminaries or university theology departments," he laments, "seem interested in genuine dialogue with the scientific community" (Templeton and Herrmann 1998, 13). Despite this, Templeton believes the future is bright. In this regard he recounts the optimistic view of 1980 Templeton Prizewinner Ralph Wendell Burhoe, the founding editor of *Zygon: Journal of Religion and Science*, who "prophesied" that a "growing group of scientific seers" would "confirm and extend religious faith" and in the process gain the confidence of theologians (Templeton and Herrmann 1998, 13). From an institutional perspective, he is pleased that numerous centers encouraging religions to engage with science have recently opened, suggesting that things are already moving in the right direction. "The overall picture," he claims, is one of "fascinating opportunity for theological progress, as the sphere of the spirit extends to new horizons," provided religious persons make the necessary changes (Templeton and Herrmann 1998, 13).

A parallel change is for scientists to become more willing to examine the theological implications of their work and to enter territory usually inhabited only by religious and theological figures. Templeton views the shift away from mechanism and determinism in the history of science as an ongoing invitation in this regard. If the deistic picture of God that purportedly grew out of Descartes's and Newton's work led to a separation of God from the world, and thus (so Templeton claims) of theology from physics, recent revolutions in physics, biology, and other areas have led to growing recognition of the complexity and mysteriousness of the world. In the process they reportedly have helped many scientists to become more open-minded toward religion (Templeton and Herrmann 1998, 10–13). Templeton marshals an array of examples to illustrate this "modern shift in science . . . to theological openness" (Templeton and Herrmann 1998, 12). In the past few decades, he notes, the number of scientists "raising philosophical and religious questions as a result of recent scientific discoveries" has by his count "multiplied" (Templeton 1996, 7). More mathematicians and natural scientists, he says, are writing books on theology (Templeton 1981, 68). Templeton names Alfred North Whitehead, Michael Polanyi, James Conant, Charles Coulson, Charles Townes, Alistair Hardy, and others as having arrived at a position of "affirming the Beyond in the midst of equations, galaxies, or . . . electrons" (Templeton and Herrmann 1998, 166).[27] Inspired by such figures, Templeton encourages all scientists and "other laymen" to "stimulate progress and expand the whole field of theology in ways that may benefit all" (Templeton 1981, 5).[28]

Much of what Templeton wants to achieve in these imagined futures of science and religion is for both scientists and religious persons to adopt a posture that will best facilitate progress in each realm, one which opens them to matters lying beyond their usual borders. This desire is reflected in his repeated insistence on humility and open-mindedness in all human endeavors. Templeton's discussion of Albert Einstein, one of the figures behind some of the key developments in his history of science, is illustrative in this regard. Einstein's world-changing accomplishments raise pressing questions for Templeton: "What kind of person was capable of such momentous thought? How did he think? What were his loyalties and liberties? What motives drove him to such earth-shaking ideas?" (Templeton and Herrmann 1998, 47). Immediately after asking these questions, Templeton asserts that what is "most striking" about Einstein is that he was "a humble man who was fascinated with the universe and its Maker" (Templeton and Herrmann 1998, 47). Insofar as he was "profoundly moved" by the "mysteries" of the universe, Templeton counts Einstein as "deeply religious" (Templeton and Herrmann 1998,

[27] Templeton and Herrmann are here quoting Rustom Roy.

[28] Templeton's focus on laypersons here is reminiscent of Amos Funkenstein's identification of a "new and unique" approach to theology that emerged in the early modern period among the kinds of figures (Galileo, Descartes, Newton, and others) on whom he focuses. The novelty of their approach, says Funkenstein, was its secular character, or the fact that it was "conceived by laymen for laymen" (Funkenstein 1986, 3).

47). That sensibility enabled Einstein to "penetrate the intelligible features" of nature and, in doing so, restore a "way of thinking . . . not tied exclusively to visible connections" but which "penetrates behind appearances to an unseen relatedness inherent in nature, which determines appearances" (Templeton and Herrmann 1998, 160). Templeton thus thinks Einstein shows us what is possible when an inquisitive and humble thinker who is open to religious concerns, and who is willing to challenge the established consensus, adopts his ideal posture and is let loose. Einstein, that is, models precisely the kind of religious and philosophical receptivity and humility that Templeton hopes future scientists will display and that future theologians might reciprocally show toward science.

Should the changes among scientists, theologians, and religious authorities that Templeton hopes to see come about, their consequences will include more theological insights, as well as the coming-together and constructive interaction of science and religion. As we saw earlier, Templeton's philanthropies have long been known for promoting this proximity and commerce between science and religion. It should now be clear that a straight line connects this aspect of Templeton's philanthropic activity to his belief in the theological utility of science, to the history of science and religion narrative that he constructed and deployed, and to the theological convictions that he inherited from Unity and which he maintained throughout his life.

CONCLUSION

For John Templeton religion and science enjoy fundamentally harmonious relations, with scientific pictures of the world amenable to immediate theological interpretation. Templeton's history of science is a story of scientists' movement away from an older picture of nature in which there is effectively no room for God—a functionally godless world—toward a newer one in which God is seen as immanently present and active. That history conveniently ends at a theological picture consistent with the theology taught by a tradition to which Templeton was personally committed. This centuries-long story of science is itself located within a progressive cosmic history, one that in Templeton's judgment also confirms God's active presence in nature and history and that makes recent theological confirmation of divine immanence through science a sign that we are now living in the spiritual phase of history.

Templeton's teleological understanding of the history of science, and his assumption of perennially harmonious science-religion relations, bucks the historiographical trend in the field his funding has helped to create. Since at least the late 1970s, historians of science and religion have become increasingly outspoken critics of narratives of history that overlay simplistic patterns and trajectories onto the messy and complex reality of the past. Although the pattern most targeted is that of perennial conflict (Brooke 2018), they have also occasionally raised concerns about narratives structured around other patterns. David Lindberg and Ron Numbers criticize historians who sacrifice "careful history for scarcely concealed apologetics" (Lindberg and Numbers 1986b, 5) and complain about the historical narratives of "Christian apologists" who presume to reframe the relationship between Christianity and science as an "essentially harmonious engagement" (Lindberg and Numbers 2003b, 2).[29] By the end of the twentieth century, they assert, historians of science and religion had grown "increasingly uncomfortable" with the "triumphalist narratives" of *both* the "warriors" and the "harmonizers" (Lindberg and Numbers 2003b, 2). Such pattern-driven narratives too easily distort what actually happened in the past to make it align with a predetermined trajectory.

[29] See also Brooke and Cantor 2000, 75–105; Brooke 1991, 42–51. Peter Harrison discusses numerous figures from the past couple of centuries who have claimed harmony between science and religion in Harrison 2018.

Although they may not use the language, by repudiating harmony-driven narratives historians of science and religion have positioned themselves firmly against a strand of historical writing familiar to religious historians, one Brad Gregory calls *confessional history* (Gregory 2006). In Christian confessional histories, an author presupposes a specific Christian tradition's convictions and writes their historical narratives in ways that reflect that commitment. Confessional historians, that is, take the claims of a particular religious tradition as true and conduct their investigation accordingly.[30] Gregory regards Eric Cochrane's presidential address to the American Catholic Historical Association in 1974 as a landmark analysis of confessional historiography (Cochrane 1975). Cochrane there identified several features, or "special prerogatives," of Catholic confessional history writing, although comparable features can also be found in other traditions: the use of theological as well as critical principles when making historical judgments; the search for later views in historically much earlier documents; the denunciation of groups that fail to align with later doctrinal pronouncements; the erasure from history of those that fail to fit a predetermined scheme or understanding; and others. Through such moves, certain historical phenomena and developments are typically concluded to be "wholly good," whereas others are deemed "wholly bad," judgments made according to standards quite external to the subject or era under scrutiny (Cochrane 1975, 174–75).

Historians of science and religion resist confessional and comparable problematic forms of history by writing histories that follow other rules. Occasional methodological comments explicitly identify some of the guidelines they typically follow. Lindberg and Numbers, for example, instructed the authors contributing to their edited collection *When Science and Christianity Meet* to "tell the story of their assigned case 'like it was,' in all its particularity." In their view, good history writing follows the evidence wherever it leads; allowing it to do so is part of what it means to "measur[e] up to the highest standards of historical scholarship" (Lindberg and Numbers 2003b, 4). Another principle is that priority should be given to the categories employed by the historical actors being studied rather than to those of the present-day authors who are analyzing them (Lindberg and Numbers 2003b, 2; Harrison et al., 2011, 4). A third is the idea that sound historical narratives should not betray the religious convictions of their author. Persons of any religious persuasion or none should therefore be able to write histories that pass muster (Lindberg and Numbers 2003b, 4; Numbers 2009b, 6). By following principles like these, historians in the field have begun to write narratives that better reflect what John Hedley Brooke and Geoffrey Cantor see as the "richness and diversity" of actual science-religions relations throughout history (Brooke and Cantor 2000, 69). Bernard Lightman observes that for Brooke, one of the most outspoken advocates for recognizing the complexities of history, complexity "is both a historical reality as well as a critique of ahistorically simplistic approaches to understanding the relationship between science and religion" (Lightman 2019, 6–7). By refusing to impose simplistic patterns on the past, Brooke and Cantor claim that history becomes more "complex and unruly" but also, they insist, more exciting (Brooke and Cantor 2000, 69).

Although his historical narrative may not meet with the approval of historians in the field he has so extensively funded, it is understandable why Templeton—ever the prudent investor—might have been attracted to a version of the past in which scientists are increasingly discovering aspects of nature that purportedly accord with his own theological vision. Templeton was constantly thinking about long-term trends in many areas of history, and he was convinced that "major trends" from the past frequently persist in the future, "often gathering speed as they go along" (Templeton 1997, 259). Being able to point to a long-term historical trend in which science has become increasingly theologically generative and has produced theological insights

[30] Confessional histories can just as readily be shaped by nonreligious or atheistic metaphysical commitments as by religious ones (Gregory 2006, 135).

consistent with a tradition for which he had deep sympathies would have given him confidence that devoting large sums of money to activities seeking to open both religious and scientific persons to science's theological benefits would yield positive returns long into the future.

If Templeton had reckoned with the historical record in ways that historians want, though, he might have realized that some of the past developments in science on which he relied to justify those future investments did not fit neatly into the story he was telling. To give just one example, Keith Hutchison and others have argued since the mid-1980s that the mechanical picture proposed by early modern figures protected, rather than rejected, what Hutchison calls a "radically supernaturalistic ontology." Their conception of matter offered a "guarantee" that supernatural activity was "ever-present" in the universe (Hutchison 1983, 297), rather than absent. In 1991, John Hedley Brooke similarly argued that those who used mechanical metaphors in the seventeenth century thought they were "enriching rather than emasculating conceptions of divine activity" in the universe (Brooke 1991, 118). Mechanical conceptions of nature thus did not necessarily lead to the picture of an absentee God that Templeton assumes they did. Beyond such specificities Templeton might have realized that historians of science and religion were increasingly opposed to either conflict- or harmony-inflected narratives that failed to reflect the complexities of history and increasingly critical of confessional histories in which theological commitments shape historical narratives.

Had he grappled with the past in these ways, Templeton might have found identifying a single coherent trajectory or pattern in the history of science rather difficult and constructing a history of science that straightforwardly vindicated his own theological commitments much less easy than he did. As the early modern situation just described indicates, nature's theological testimony is more ambiguous than Templeton's history might lead one to believe. Acknowledging as much need not have undermined those activities—helping scientists become more open to religion and religious persons more open to science, in the hope that future scientific developments might be theologically productive—for which he was calling. But recognizing that the past did not always fit the story he told would have left Templeton without a historical narrative that straightforwardly testified to the theological fruit that scientific developments have purportedly already borne. Without such a narrative to rely on, investing in more of those activities in the future would therefore have seemed a riskier—because less historically validated—proposition.

REFERENCES

Barbour, Ian G. 1966. *Issues in Science and Religion*. London: SCM Press.

Brooke, John Hedley. 1991. *Science and Religion: Some Historical Perspectives*. Cambridge: Cambridge University Press.

——. 2018. "Historians." In *The Warfare between Science and Religion: The Idea that Wouldn't Die*, edited by Jeff Hardin, Ronald L. Numbers, and Ronald A. Binzley, 258–78. Baltimore: Johns Hopkins University Press.

——. 2019. "Afterword: The Instantiation of Historical Complexity." In *Rethinking History, Science, and Religion: An Exploration of Conflict and the Complexity Principle*, edited by Bernard Lightman, 235–42. Pittsburgh: University of Pittsburgh Press.

Brooke, John Hedley, and Geoffrey Cantor. 2000. *Reconstructing Nature: The Engagement of Science and Religion*. Oxford: Oxford University Press.

Carnes, Tony. 2005. "The $1 Billion Handoff." *Christianity Today* 49 (9): 88–91.

Clayton, Philip. 2014. "The Fruits of Pluralism: A Vision for the Next Seven Years in Religion/Science." *Zygon: Journal of Religion and Science* 49 (2): 430–42.

Cochrane, Eric. 1975. "What Is Catholic Historiography?" *Catholic Historical Review* 61 (2): 169–90.

Davies, Paul. 1983. *God and the New Physics*. London: J.M. Dent & Sons.

Eisley, Loren. 1984. *The Firmament of Time*. New York: Athenaeum.

Funkenstein, Amos. 1986. *Theology and the Scientific Imagination: From the Middle Ages to the Seventeenth Century*. Princeton, NJ: Princeton University Press.

Gregory, Brad S. 2006. "The Other Confessional History: On Secular Bias in the Study of Religion." *History and Theory* 45 (4): 132–49.
Hardin, Jeff, Ronald L. Numbers, and Ronald A. Binzley, editors. 2018. *The Warfare between Science and Religion: The Idea that Wouldn't Die*. Baltimore: Johns Hopkins University Press.
Harrison, Peter. 2015. *The Territories of Science and Religion*. Chicago: The University of Chicago Press.
——. 2018. "Neo-Harmonists." In *The Warfare between Science and Religion: The Idea that Wouldn't Die*, edited by Jeff Hardin, Ronald L. Numbers, and Ronald A. Binzley, 239–57. Baltimore: Johns Hopkins University Press.
Harrison, Peter, Ronald L. Numbers, and Michael H. Shank. 2011. "Introduction." In *Wrestling with Nature: From Omens to Science*, edited by Peter Harrison, Ronald L. Numbers, and Michael H. Shank, 1–7. Chicago: The University of Chicago Press.
Herrmann, Robert L. 2004. *Sir John Templeton: Supporting Scientific Research for Spiritual Discoveries*. Philadelphia: Templeton Foundation Press.
——. 2013. *Looking Forward Looking Upward: My Life, My Friendship with Sir John, and the Early Years of the John Templeton Foundation*. Philadelphia: Templeton Press.
Hutchison, Keith. 1983. "Supernaturalism and the Mechanical Philosophy." *History of Science* 21 (3): 297–333.
John Templeton Foundation. 2024. "Our Impact." *John Templeton Foundation*. Available at https://www.templeton.org/about/vision-mission-impact. Accessed February 19, 2024.
Krauss, Lawrence M. 1999. "An Article of Faith: Science and Religion Don't Mix." *The Chronicle of Higher Education*. 46 (14): A88.
Lightman, Bernard V. 2019. "Introduction." In *Rethinking History, Science, and Religion: An Exploration of Conflict and the Complexity Principle*, edited by Bernard V. Lightman, 3–16. Pittsburgh: University of Pittsburgh Press.
Lindberg, David C., and Ronald L. Numbers, editors. 1986a. *God and Nature: Historical Essays on the Encounter between Christianity and Science*. Berkeley: University of California Press.
——. 1986b. "Introduction." In *God and Nature: Historical Essays on the Encounter between Christianity and Science*, edited by David C. Lindberg and Ronald L. Numbers, 1–18. Berkeley: University of California Press.
——. 2003a. *When Science and Christianity Meet*. Chicago: The University of Chicago Press.
——. 2003b. "Introduction." In *When Science and Christianity Meet*, edited by David C. Lindberg and Ronald L. Numbers, 1–5. Chicago: The University of Chicago Press.
MacKay, Donald. 1974. *The Clockwork Image: A Christian Perspective on Science*. Downers Grove, IL: InterVarsity Press.
Moore, James. 1979. *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870–1900*. Cambridge: Cambridge University Press.
Noll, Mark A., and David C. Livingstone. 2018. "Introduction." In *The Warfare between Science and Religion: The Idea that Wouldn't Die*, edited by Jeff Hardin, Ronald L. Numbers, and Ronald A. Binzley, 1–5. Baltimore: Johns Hopkins University Press.
Numbers, Ronald L., editor. 2009a. *Galileo Goes to Jail: And Other Myths about Science and Religion*. Cambridge, MA: Harvard University Press.
——. 2009b. "Introduction." In *Galileo Goes to Jail: And Other Myths about Science and Religion*, edited by Ronald L. Numbers, 1–7. Cambridge, MA: Harvard University Press.
Peacocke, Arthur R. 1979. *Creation and the World of Science*. Oxford: Oxford University Press.
Peters, Ted. 2017. "Cult Books Revisited: Ian Barbour's *Issues in Science and Religion*." *Theology* 120 (3): 163–71.
Polkinghorne, John. 1984. *The Quantum World*. London: Longman.
——. 1986. *One World: The Interaction of Science and Theology*. Princeton, NJ: Princeton University Press.
Proctor, William, and Scott Phillips. 2012. *The Templeton Touch*. Philadelphia: Templeton Press.
Russell, Colin A. 2000. "The Conflict of Science and Religion." In *The History of Science and Religion in the Western Tradition: An Encyclopedia*, edited by Gary B. Ferngren, 12–17. New York: Taylor and Francis.
Russell, Robert John, editor. 2004. *Fifty Years in Science and Religion: Ian G. Barbour and His Legacy*. Farnham, UK: Ashgate.
Schneider, Nathan. 2010. "God, Science and Philanthropy: The Politics of the Templeton Foundation's 'Big Questions.'" *The Nation* 290 (24): 11–17.
Slattery, John P. 2017. "Dangerous Tendencies of Cosmic Theology: The Untold Legacy of Teilhard de Chardin." *Philosophy and Theology* 29 (1): 69–82.

Templeton, John M. 1975. "Address by Mr. John M. Templeton." *The Templeton Prize*, April 21, 1975. Available at https://www.templetonprize.org/laureate-sub/address-by-mr-john-m-templeton-2/. Accessed February 19, 2024.
——. 1976. "Address by Mr. John M. Templeton." *The Templeton Prize*, May 2, 1976. Available at https://www.templetonprize.org/laureate-sub/address-by-mr-john-m-templeton/. Accessed February 19, 2024.
——. 1981. *The Humble Approach: Scientists Discover God*. New York: The Seabury Press.
——. 1995. *The Humble Approach: Scientists Discover God*. Reissued. New York: Continuum.
Templeton, John M., editor. 1996. "Introduction." In *Evidence of Purpose: Scientists Discover the Creator*. New York, NY: Continuum.
Templeton, John M. 1997. *Is Progress Speeding Up? Our Multiplying Multitudes of Blessings*. Philadelphia: Templeton Foundation Press.
——. 1998. *The Humble Approach: Scientists Discover God*. Reissued. Philadelphia: Templeton Foundation Press.
——. 2000. *Possibilities for Over One Hundredfold More Spiritual Information: The Humble Approach in Theology and Science*. Philadelphia: Templeton Foundation Press.
Templeton, John M., editor. 2006. *Riches for the Mind and Spirit: John Marks Templeton's Treasury of Words to Help, Inspire, and Live by*. Philadelphia: Templeton Foundation Press.
Templeton, John M., and Robert L. Herrmann. 1989. *The God Who Would Be Known: Revelations of the Divine in Contemporary Science*. San Francisco: Harper & Row.
——. 1994. *Is God the Only Reality? Science Points to a Deeper Meaning of the Universe*. Philadelphia: Templeton Foundation Press.
——. 1998. *The God Who Would Be Known: Revelations of the Divine in Contemporary Science*. Reissued. Philadelphia: Templeton Foundation Press.
Ungureanu, James. 2019. *Science, Religion, and the Protestant Tradition: Retracing the Origins of Conflict*. Pittsburgh: University of Pittsburgh Press.
Weaver, John. 2015. "Big Questions About Templeton: How the Philanthropic Giant Legitimizes Faith Healing." *The Public Eye* Summer:14–18.
Wheeler, David. 1997. "A Foundation Seeks to Create a Discipline in the Intersection of Science and Theology." *The Chronicle of Higher Education* 43 (31): A15–A16.