collaboration and inspiration drawn from Roger Haight's brilliantly accessible accomplishment.

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II. Grace-Filled Nature or a Whole New Paradigm? A Response to *Faith and Evolution*

More than thirty years ago, the Vatican called attention to the relationship between religion and science, indicating the need for openness and genuine dialogue. In his 1988 letter to Fr. George Coyne, SJ, who was then head of the Vatican Observatory, Pope John Paul II described the need to integrate science and religion. Although science and religion are distinct disciplines with their own methods, language, and epistemologies, he said, a unified understanding of reality, one that can inspire faith, requires insights from both areas. Theology has held science at arm's length, but faith cannot adequately achieve understanding apart from science. In the pope's words: "Only a dynamic relationship between theology and science can reveal those limits which support the integrity of either discipline, so that theology does not profess a pseudo-science and science does not become an unconscious theology. Our knowledge of each other can lead us to be more authentically ourselves."[16] The pope's eloquent insights are summed up toward the end of the letter where he states: "Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish."[17]

I find a lot of John Paul II's ideas on religion and science expressed in the first few chapters of Roger Haight's new book, *Faith and Evolution*. Haight begins by calling attention to the world disclosed by science, stating that science is "revelatory" (1). He then proceeds to recount the rise of modern science, highlighting key events that liberated science from medieval theology, beginning with Copernicus and Galileo and the Copernican revolution and, on the side of biology, Charles Darwin and the discovery of evolution. He spends a considerable amount of time on Darwin's contribution to

[16] Pope John Paul II, Letter of His Holiness John Paul II to Reverend George V. Coyne, SJ, Director of the Vatican Observatory (June 1, 1988), http://www.vatican.va/content/john-paul-ii/en/letters/1988/documents/hf_jp-ii_let_19880601_padre-coyne.html.

[17] Ibid.

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evolution because, as he rightly notes, evolution is not a theory but the best description of our biological reality. This new reality on the cosmic scale is marked by the big bang, which renders the universe old, large, dynamic, and interconnected.

I agree with much of chapter 2 of Haight's book, "Understanding Reality through Science and Faith." Here he makes some very important points, especially his emphasis on evolution as fundamental to the task of theology: "Deliberately to ignore evolution or to refuse to think around it fundamentally undercuts the realism for which theology strives" (48). Science must indeed be a starting point for saying anything about religion because it offers the best description of reality. Hence, the idea that "science can be normative for theology" is very attractive (48). Like John Paul II, Haight sees that the relationship between science and religion cannot be a "vanilla blending" of the two disciplines or a collapse of theology into empirical data. "Integration," Haight writes, "entails finding transcendence not in a sphere separate from this empirical world, but as a way of grasping a distinct dimension that lies within the empirical order"; hence, the author's effort to describe a "grace-filled" naturalism (53). What is really at stake is a unified way of knowing the world; as Teilhard de Chardin noted, "Religion and science are the two conjugated faces or phases of one and the same complete act of knowledge—the only one which can embrace the past and future of evolution as to contemplate, measure and fulfill them."[18]

Haight's purpose for writing this book is to enkindle a constructive and positive dialogue between Christian faith and science (236). This is a noteworthy aim, but this road has been traveled many times before over the last fifty years. Much of what Haight describes in his book is not new, and he relies on a wealth of twentieth-century scholarship to support his ideas. In 1966 Ian Barbour wrote *Issues in Science and Religion*, in which he provided a fourfold relationship between science and religion, launching a new field of study. Barbour's book spawned a wealth of scholarship, and efforts to bring science and religion into dialogue were at the forefront of many initiatives in the 1980s, 1990s, and into the twenty-first century. These initiatives included the Metanexus Institute, the Institute for Religion in an Age of Science, the Center for Theology and Science at Berkeley, the journals *Zygon* and *Theology and Science*, and other initiatives that drew from Barbour's work. However, almost sixty years later we are no further along in the dialogue between science and religion than we were when Barbour

[18] Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper Row, 1959), 285.

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wrote his book or when John Paul II wrote his letter. Theology continues to be done against the background of medieval cosmology and philosophy. It is not that efforts have failed in bringing theology into conversation with modern science. It is rather that the approach to science and religion does not adequately allow for these areas to contribute to a unified view of reality. Both science and religion are fundamentally stifled by the lack of a new metaphysics and, correspondingly, a new epistemology, as Joseph Bracken has noted.[19]

I think Haight strives to make a meaningful contribution to bring theology into an evolutionary worldview, but his approach lacks sufficient depth and breadth to enact such a change. Two points in particular lead me to this conclusion: the first is an insufficient grappling with the underlying strata of evolution, including complex dynamic systems, chaos theory, quantum biology, and emergence. In other words, even a cursory view of evolution must deal with the question of matter and the constancy of change. If indeed science is to be taken seriously as a starting point for theological reflection, then it must also be taken seriously as a starting point for philosophical reflection. The doctrines of Christian faith are rooted in distinct philosophical ideas. The lack of addressing philosophical shifts brought about by modern science leaves a yawning gap. Here I think of the work of F. LeRon Shults, especially his book, *Christology and Science*, where he nicely maps out the philosophical transitions spawned by modern science, especially with regard to Aristotelian ideas on substance, matter, and form, which continue to influence academic theology. Haight leaps from the world of Einstein into theology, seeking to articulate new ideas on divine action, creation, sin, salvation, and eschatology, among other doctrines; yet he does no more than update Thomistic theology in view of contemporary scientific ideas. Scholars have shown that Aquinas' ideas on causality were based on the Islamic interpretation of *The Book of Causes* composed by the fifth-century Neoplatonic philosopher, Proclus. The whole teaching of *The Book of Causes* follows from its first proposition: "Every primary cause infuses its effect more powerfully than does a universal second cause."[20] Similarly, scholars consistently note that Thomas' ideas on God and creation were

[19] See, for example, Joseph Bracken, SJ, "Foundational Principles for an Organically Constituted World," *Theology and Science* 17, no. 1 (2019): 119–32; "A New Methodology for Christian Systematic Theology," *Zygon* 54, no. 3 (2019): 575–87.

[20] Cited in Cristina D'Acona, "The Liber de causis," in *Interpreting Proclus: From Antiquity to the Renaissance*, ed. Stephen Gersh (Cambridge: Cambridge University Press, 2018), 142; Lawrence Dewan, OP, "St. Thomas and the Causality of God's Goodness," *Laval théologique et philosophique* 34 (1978): 291–304.

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heavily influenced by Islamic philosophers, especially Avicenna.[21] Causality, however, has largely been supplanted by information, cybernetics, and open systems, described by complex dynamical systems.[22] Haight does not elaborate on systems thinking and sees a genuine contribution of primary and secondary causality as integral to evolution, a concept of causality described by adherents of Thomistic metaphysics (75–76).

Having worked in the area of science and religion for several decades, I have long wondered why efforts to bridge science and religion have failed to produce any significant results. I have finally come to the conclusion that we are asking the wrong question; the construct of science and religion is, in a sense, an artificial one created after the Galileo affair and the rise of modern philosophy. The contemporary scholar approaches the question of science and religion from a Kantian perspective, the knower in search of meaning. It is a one-dimensional paradigm, exalting the subject who, using logical and rational procedures, progressively approaches and gains control over an external object (for example, a model of science and religion). The subject makes every effort to establish an appropriate method, which in itself is already a technique of possession, mastery, and transformation. What is the problem with this paradigm? It contradicts the basic principles of nature itself. If the aim of true knowledge is to be in harmony with nature, then the starting point for knowing anything, including religion, must be nature. In this respect, our epistemological models must change both in science and religion. Karen Barad's work on agential realism and intra-action, where both knower and known are reciprocally related, is helpful here.[23] We humans emerge from nature; we are part of nature and thus our knowledge must begin on the level of nature and redound on the whole of nature, both in science and religion.

I think a more fruitful way of achieving the aim set out in this book is to begin to reflect philosophically on what science is telling us about nature,

[21] On the influence of Avicenna on Aquinas, see John F. Wippel, "The Latin Avicenna as a Source for Thomas Aquinas's Metaphysics," *Freiburger Zeitschrift Für Philosophie und Theologie* 37 (1990): 51–90; Deborah Black, "Mental Existence in Thomas Aquinas and Avicenna," *Medieval Studies* 61 (1998): 41–79; Julie Ann Swanstrom, "The Metaphysics of Causation in the Creation Accounts of Avicenna and Aquinas" (PhD diss., Purdue University, 2013), https://docs.lib.purdue.edu/open_access_dissertations/58; David Burrell, "Thomas Aquinas and Islam," *Modern Theology* 20, no. 1 (1994): 71–89; Joseph Kenny, OP, "Thomas Aquinas, Islam and the Arab Philosophers," http://www.catholicapologetics.info/apologetics/islam/thomas.htm.

[22] See, for example, the work of philosopher Alicia Juarrero, "Complex Dynamical Systems and the Problem of Identity," *Emergence* 4 (2002): 94–104.

[23] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007).

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that is, rethinking concepts such as matter, spirit, soul, and divine action, beginning on the fundamental level of physics. In turn, the limits of science must also be considered because science tends to be reductionistic and can easily, like religion, lead to fallacies of misplaced concreteness (to use Whitehead's term). Process thought offers a much richer starting point for understanding faith in a world of evolution primarily because it begins with genuine relationships as the ground of existence, an idea consonant with quantum physics. "Relationality" is the operative word for science and religion, and we must begin to think about what we are in terms of relational being and what faith offers in terms of deep, cosmic relationships. It is surprising that Haight offers no discussion on process thought, except a brief reference to Alfred North Whitehead. Yet, relationality undergirds the raging question today in physics and philosophy, namely, the relationship between consciousness and matter, now defined as the "hard problem of matter."[24] Nothing can be said in science or religion apart from consciousness. Teilhard de Chardin rejected Darwinian evolution because it left out mind from the description of matter (a problem in both science and religion). He described evolution as a rise in consciousness, an essential insight missing from Haight's discussion.

Without grappling with the "nature" of nature, we hang on to historical ideas of faith and reason that no longer reflect the insights of our scientific world. Today, computer technology is our fastest evolver. It emerged in the mid-twentieth century and has come to dominate every aspect of our lives. Some transhumanists claim that technology will fulfill what religion promises. By not adequately aligning theology with a world in evolution, we have paved the way for artificial intelligence (AI) to lead us to the Singularity, the anticipated merger between biology and technology. If we want to understand how faith can thrive in a world of evolution, we might look to the tailwinds of artificial intelligence (AI) and the way the human person is quickly transitioning to a new species. The AI train is like an Acela Express; it has left the station, but religion is not on it.

I realize that Haight's book is an invitation to theologians, pastors, and people of faith to make sense of our core beliefs in light of modern science, but I also think it is time to consider a whole new paradigm for religion. Modern science emerged because of two radical paradigm shifts after the Middle Ages: first, the heliocentric universe, and second, the big bang universe. If religion is to flourish in the twenty-first-century scientific world, it

[24] See Gaylen Strawson, "Consciousness Isn't a Mystery. It's Matter," *New York Times*, May 15, 2016, https://www.nytimes.com/2016/05/16/opinion/consciousness-isnt-a-mystery-its-matter.html.

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too will need to make a radical paradigm shift, something the Vatican has yet to discuss.

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III. Naming the God of Evolution

In *Faith and Evolution: A Grace-Filled Naturalism*, Roger Haight presents a significant response to the desire of twenty-first-century Christians for a faith conversant with science. Haight does so, not through the common typologies, but rather in the mode of Karl Rahner in *Foundations of Christian Faith*:

> The author would like to address himself to readers . . . who are not afraid to "wrestle with an idea" . . . I shall try as far as possible to situate Christianity within the intellectual horizon of people today . . . giving an intellectually honest justification of Christian faith.[25]

Accepting evolutionary insights as a given, Haight seeks to provide intelligibility to Christian faith within this horizon. In any such enterprise, there will be both gains and losses. Although concepts and images that have been part and parcel of the Christian experience can be enhanced with richer meaning in this dialogue, they are sometimes deprived of the impact experienced by Christians for centuries. And so it is with Haight's enterprise. This review frames itself around such gains and losses in three areas: the issue of language, the metaphor of Presence, and divine intervention and self-limitation.

In raising the issues that evolution poses to a theology of creation, Haight retrieves John Haught's question, "What is God?" and signals his intent to seek a religious language that "rises above the anthropomorphism of ordinary religious language" to appropriate a language "as critical as the one used by scientists to understand material exchanges of nature" (62). Opting for a dialectical approach that counteracts the language of a "naïve faith" (63), his intent is to preserve the utterly transcendent being of God from inadequate human predicates, counteracting the tendency to "think about God in baby language when addressing the world that has been described by the mature and measured language of science" (70). This intent raises the question of the nature of language in theology and science. It seems to imply that

[25] Karl Rahner, *Foundations of Christian Faith* (New York: Herder & Herder, 1982), xi–xii.

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