

Aquinas and the Sciences: Exploring the Past, Present, and Future

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The 21st century has witnessed a renewed interest in Thomas Aquinas and the Thomistic tradition within the field of science and religion.¹ It is no exaggeration to claim that Thomism represents a major voice in contemporary science and religion discourse, as evidenced by numerous recent publications.²

Historical research shows, however, that this state of affairs is by no means a given, and that the history of Thomism and the sciences is both interesting and complex. In his 1968 essay titled “Thomism and Modern Science: Relationships Past, Present, and Future,” William A. Wallace, a prominent proponent of River Forest Thomism—a movement deeply engaged with the natural sciences—laments that by the end of the 19th century, the Thomists lost touch with science after a long period of productive engagement with it. According to Wallace, Thomists from the 14th to the 16th century were not only actively engaged with the sciences but also contributed to their development. Science, Wallace (1968, p. 69) observes, “entered into the very fabric of the Thomistic synthesis and was responsible, in large part, for the value of that synthesis as an integration of all of knowledge, both human and divine.” With the rise of modern science, however, things started to change, particularly within the manual tradition. From the 17th to the 19th century, Thomists largely lost traction with many of the latest scientific developments, often resulting in closed-minded and negative attitudes towards certain theories in the modern sciences. By the end of the 19th century, Wallace (1968, p. 77) explains, Thomists would eventually “grow increasingly aware that much of their rejection of modern science is arbitrary, and gradually they delete all references to science from their manuals of philosophy. They make a hurried retreat from natural philosophy, and place emphasis instead on metaphysics.”³

The aim of Wallace’s thought-provoking essay was “to examine anew the relationships between Thomism and modern science [. . .] to chart a program for the future” (Wallace 1968, p. 67). Learning from past failures, Thomists have begun to adjust their approach in several important ways: by engaging with new scientific developments more open-mindedly, avoiding overly authoritative reasoning; by offering more nuanced and differentiated evaluations of new discoveries; by incorporating relevant insights more swiftly into theological and philosophical reflection; and, last but not least, by an active willingness to “get their hands dirty,” so to speak. As Wallace (1968, p. 83) notes, one of the main reasons for the failure of earlier Thomists was to be “content to remain at a very general level, concentrating on metaphysics, and neglecting the specialized disciplines,” thereby allowing “their theology to be completely untouched by scientific progress.” Wallace ends with a compelling call to action, which we seek to carry forward in this Special Issue with what we coin “Science-Engaged Thomism”: “Thomists must be encouraged to become increasingly concerned with, and enlivened from their contact with, the specific problems of the physical, biological, psychological, social and political sciences.”



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In the 21st century, two pioneers who more than others have paved the way for and fostered the above-mentioned scholarly interest in Thomism in the science and religion discourse are William E. Carroll and Michael J. Dodds. While Thomism is particularly well known for its role in the divine action debate,⁴ its contributions have since expanded into a range of other areas of inquiry, such as quantum physics, cosmology, astrobiology, and the search for extra-terrestrial intelligence; origin of life studies, evolutionary biology, ecology, and biomedicine; psychology, neuroscience, and human enhancement; and artificial intelligence.⁵ The debate is currently proliferating, spreading into a wide range of areas of philosophical and theological discourse.

What is more, Thomists have recently suggested that Thomas Aquinas himself is an exemplar of engagement with the sciences (Silva and Recio 2025). Obviously, there were no natural sciences in the modern sense at the time. But Aquinas is well known for his engagement with the best knowledge of the natural world available to him for theological purposes. The suggestion is that his approach offers valuable insights for contemporary dialogue between science and theology, and, in particular, so-called Science-Engaged Theology (SET). In line with the new movement of SET,⁶ we propose the label “Science-Engaged Thomism” (SETh) to illustrate that an engagement with the sciences—an engagement of the specific sort in question—has been an integral part of Thomism.⁷ For this purpose, we suggest the following basic understanding of SET:

(SET) Theology is science-engaged if and only if science is, and is used as, an epistemic source of theology.

On this basis, SETH can be introduced as follows:

(SETh) Thomism is science-engaged if and only if science is, and is used as, an epistemic source of Thomism.

We take Thomism to include both Thomistic theology and philosophy. Science would therefore be an epistemic source of Thomistic theology and philosophy. While in many cases the epistemic source in question may be considered a source of knowledge, we propose the use of the broader category of “epistemic source” as a common conceptual starting point. Two conditions are crucial: first, science must *be* an epistemic source of (Thomistic) theology (or philosophy); and second, it must be *used as such*. If science is an epistemic source, but we do not tap into it, as it were, it will not count as SET or SETH. Conversely, if we tap into it, but science turns out not to be a source of (Thomistic) theology (or philosophy), it will likewise fall short of constituting SET or SETH.

This Special Issue showcases current work in the field, combining both historical and systematic perspectives. It explores how Thomas Aquinas and the Thomists from different ages related their thought to the natural and social sciences. What can contemporary theology, philosophy, science and religion, and the history of these disciplines gain from an engagement with the thought of Thomas Aquinas and his appropriation and integration of, and perspectives on, the natural and social sciences? Additionally, how did Thomists in later centuries live up to this challenge? What is the status quo of Aquinas scholarship and Thomistic contributions on science and theology, or more recently SET, today?

This Special Issue opens with Simon Maria Kopf’s essay, “Science-Engaged Thomism,” which provides the conceptual framework for what follows. Kopf argues that there is a form of Thomism that can—in contradistinction to the recent movement of Science-Engaged Theology—be properly called Science-Engaged Thomism. He then goes on to show that Thomists—and indeed Aquinas himself—have treated the best science of their time as a legitimate epistemic source of theology. Kopf invites contemporary Thomists to adopt a similarly constructive stance toward modern science, without compromising their metaphysical and theological commitments. For this reason, he not only highlights current

work in this area but also underscores the key distinctions between Science-Engaged Thomism and the recent movement of Science-Engaged Theology.

Philip-Neri Reese, O.P., then turns to the twentieth-century school of River Forest Thomism, as a prominent example of a methodologically rigorous engagement with the natural sciences. In his “Losing the Forest for the Tree,” Reese carefully evaluates whether one of its main theses, namely, that “metaphysics cannot be established as a distinct and autonomous science unless one has already proven the existence of a positively immaterial being,” should be considered as an essential feature. He argues that, even though we should dispense with this thesis, Thomists have reason to appreciate the school’s insistence that philosophy should remain in dialogue with the sciences—an engagement which Reese characterises in terms of four core theses derived from River Forest Thomism. His analysis ultimately shows how Thomism can and should remain open to empirical knowledge without narrowing itself to a single methodological commitment.

Ignacio Silva’s contribution, “Thomas Aquinas and Some Neo-Thomists on the Possibility of Miracles and the Laws of Nature,” shifts the focus to divine action and the natural order. Silva contrasts Aquinas’s sophisticated account of obediential potency—where creation remains genuinely open to divine novelty—with later Neo-Thomist treatments that leaned on early modern notions of the laws of nature. By showing how Aquinas’s model is at once more faithful to metaphysics and more compatible with philosophy of science, Silva reframes the debate over miracles in terms that avoid crude suspensions of the natural order.

The theme of biology enters through Gonzalo Luis Recio and Ignacio Enrique Del Carril’s historical study, “Neo-Thomism and Evolutionary Biology: Arinterro and Donat on Darwin,” in which the authors trace how two scholars responded very differently to Darwinism: the Spanish Dominican Juan González Arinterro, who embraced a kind of evolutionary dynamism compatible with Thomism; and the Austrian Jesuit Josef Donat, who resisted it, insisting on direct divine interventions at the origin of each phylum. Their contrasting reactions illustrate both the difficulties and opportunities that Darwin posed for the Thomistic tradition.

Amerigo Barzaghi’s “A Plea to Thomists: Will the Real Darwinian Please Stand Up?” continues the discussion about evolution, but from a philosophical perspective. Revisiting Aquinas’s Fifth Way, Barzaghi critiques recent defences that distinguish intrinsic from extrinsic teleology, leaving the argument vulnerable to Darwinian counter-explanations. He argues that Darwin’s theory undermines the inferential step from teleology to divine causality. As an alternative, he proposes a shift away from natural-theological argumentation toward a theology of nature, in which the intelligibility of purposiveness is interpreted through faith rather than offered as an independent proof of God.

Mariusz Tabaczek offers a constructive metaphysical synthesis of evolutionary processes and Thomistic philosophy in his “A Contemporary Aristotelian–Thomistic Perspective on the Evolutionary View of Reality and Theistic Evolution.” He develops a robust hylomorphic and teleological framework for understanding evolution—one that integrates divine providence with the operation of secondary causes. Tabaczek concludes with ten postulates for a Thomistic account of theistic evolution, envisioning a metaphysical and theological framework wherein faith and science mutually inform and enrich one another.

From biology the Special Issue turns to anthropology. In his “Science and Philosophy in a Thomistic Anthropology of Sexual Difference,” John DeSilva Finley examines the interplay of scientific inquiry and Thomistic philosophy in the context of human sexual difference. Continuing his exchange with William Newton, Finley argues that in light of certain modern biological discoveries, the sexual differentiation of male and female should be located not primarily in matter, or the body, as Aquinas would suggest, but rather in the

substantial form, or the soul. Finley's integration of biology and metaphysics illustrates how a Thomistic anthropology might engage today's contested questions by drawing on its classical foundations while revisiting its specific applications.

The human person is also the centre of Daniel D. De Haan's "Freeing the Will from Neurophilosophy," in which he addresses the challenge to free will posed by Libet-style neuroscientific experiments. Drawing on Aquinas's nuanced account of intellect and will, De Haan argues that such experiments assume a causal theory of voluntary action, according to which neural events prefigure and determine conscious choice, suggesting that these experiments target pre-conscious neural events, not voluntary action properly understood. In contrast, he proposes a Thomistic hylomorphic account of action, in which the will, informed by reason, formally specifies and directs bodily movements. This teleological view treats human action as a unified whole rather than a chain of antecedent causes.

The theme of human experience continues in Juan Camilo Espejo-Serna, John Anderson P-Duarte, and Jorge Eduardo Arbeláez's "Presence in the Dark," in which they explore how joint attention—a concept from cognitive science—can deepen theological accounts of divine presence. Engaging with the proposals of Eleonore Stump, Andrew Pinsent, as well as Donald Bungum's critique, they analyse the varying modes in which believers experience God's presence. Drawing on enactivist theories of cognition, they propose an action-centred account in which God's presence is disclosed through morally infused activity rather than constant propositional awareness. This approach accommodates experiences of "dark night" or spiritual absence, while affirming genuine union with God.

The Special Issue concludes with William M. R. Simpson's ambitious essay, "The Cosmos as a World City." Simpson argues that the West's civic crisis is, at root, cosmological, born of a modern loss of the universe as a structured whole. Drawing on the Platonic isomorphism between soul, city, and cosmos and on hylomorphism, while engaging with physics and political philosophy, Simpson proposes a vision of cosmos, person, and polis as ordered by form and matter. His vision suggests that Thomism provides resources not only for science and philosophy but also for civic renewal and cultural imagination.

Taken together, the essays gathered in this volume attest to the vitality and diversity of current Thomistic engagement with the sciences. Ranging from historical studies of past debates to constructive proposals addressing contemporary questions in biology, neuroscience, anthropology, and civic life, these contributions illustrate both the challenges and the promise of what we have called Science-Engaged Thomism. In addition, this collection demonstrates that Thomism, far from being a relic of a pre-modern worldview, remains a living tradition capable of fruitful dialogue with contemporary science while staying faithful to its metaphysical depth.

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Notes

- ¹ By the term "Thomism," we refer, broadly speaking, to the movement of the followers of Thomas Aquinas, both in its theological and philosophical dimension. As Weisheipl (2003b, p. 40) defines it, Thomism is "a systematic attempt to understand and develop the basic principles and conclusions of St. Thomas Aquinas in order to relate them to the problems and needs of each generation."
- ² For an overview, see Silva (2025).
- ³ This situation was unfortunate, not least because it failed to live up to the expectations set for Thomism and its revival by Leo XIII's encyclical *Aeterni Patris* (1879). Weisheipl (2003a, p. 774) reports: "During the pontificate of Leo XIII the reestablishment of scholasticism had six goals," among which he lists as the final two: "(5) to study the physical sciences and examine their relevance to philosophy; and (6) to construct a new scholastic synthesis of all philosophy consistent with the progress of modern science."
- ⁴ See, for example, Carroll (2008); Dodds (2012); Tabaczek (2021); Silva (2022); Kopf (2023).

- ⁵ Recent book-length treatments include, on quantum physics, [Koons \(2022\)](#); see also [Simpson et al. \(2017\)](#); on cosmology, astrobiology, and extra-terrestrial intelligence, [George \(2005\)](#), [Boulding \(2022\)](#), and [Davison \(2023\)](#); on evolutionary biology, [Austriaco et al. \(2020\)](#), [Tabaczek \(2024a\)](#), [Carreño Pavez \(2024\)](#), and [Austriaco \(2025\)](#); on ecology, [Thompson \(2017\)](#); and on bioethics, [Austriaco \(2021\)](#). See also [Feser \(2014, 2019, 2024\)](#) for a more general introduction to Thomism and biology, physics, and psychology. For the other, more specific topics mentioned, see, for example, the following articles: on origin of life studies, [Tabaczek \(2023a\)](#); on neuroscience, [De Haan \(2017, 2018\)](#); on human enhancement, [Eberl \(2014\)](#), [Baggot \(2021\)](#), and [Tabaczek \(2023b\)](#); and on artificial intelligence, [Tabaczek \(2024b\)](#), [Xu \(2024\)](#), and [Moura \(2025\)](#).
- ⁶ See [Perry and Leidenhag \(2023\)](#). For a critical evaluation of SET, see [Kopf \(2025\)](#).
- ⁷ For a more extended discussion, see [Silva \(2025\)](#) and [Kopf \(2025\)](#).

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