

The Doctrine of the Trinity: Intellectual Construct or Ontological Reality? Reflections from the Philosophy of Science

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Abstract: This article draws on the distinction between instrumentalism and realism in the philosophy of science to consider the merits of two possible approaches to the doctrine of the Trinity. One considers this doctrine to be an intellectual construct, which coordinates multiple insights about the nature and action of God; the other considers it to be a statement about the ontological reality of God. After considering some of the scientific issues associated with each of these positions, it is argued that the Trinity can be helpfully envisaged theologically in both these manners, providing that they are not separated or considered to be incompatible. The article concludes by exploring the potential contribution of each approach to contemporary theological reflection.

Introduction

This article draws on the philosophy of science to explore two distinct, though not incompatible, ways of thinking about the doctrine of the Trinity, and to identify their respective merits. Are we to think of the Trinity as a mental framework which holds together the multiple elements of the complex and rich Christian experience of God? Such a framework would be a creation of the human mind, developed to coordinate a set of observations and experiences. Or is it a statement about the ontological reality of God? These two positions, of course, are perfectly capable of being reconciled; they nevertheless are

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distinct in terms of their approach and function. Since this distinction has been discussed extensively within the philosophy of science, it seemed appropriate to draw on this discussion to explore the respective character and merits of these two approaches, given the ongoing vitality of Trinitarianism in contemporary systematic theology.

‘Suddenly we are all trinitarians, or so it would seem.’¹ Colin Gunton’s remark of 1997 witnesses to the remarkable resilience of Trinitarianism, which continues a quarter of a century later. While Christian theology is generally agreed be characterized by its belief, whether implicit or explicit, in a doctrine of the Trinity, this needs to be distinguished from the stronger claim that is now frequently encountered to the effect that the doctrine of the Trinity can in some way function as a methodological principle or norm that can be applied to the remainder of theology, or serve as its organizing theological principle.² On this approach, the doctrine of the Trinity is not one theological *locus* among many, but something that ‘constitutes and explicates the overall context of all dogmatic and ethical statements’, and is thus to be understood as a ‘framework theory’ of Christian theology.³ John Webster, for example, argues that the Trinity is a ‘distributed doctrine’, of which all other articles of Christian teaching are ‘an amplification or application, and which therefore permeates theological affirmations about every matter’.⁴ For Webster, ‘all other Christian doctrines are applications or corollaries of the one doctrine, the doctrine of the Trinity’.⁵

¹ Colin Gunton, *The Promise of Trinitarian Theology*, 2nd edn (Edinburgh: T&T Clark, 1997), p. xv.

² For Gunton’s argument for a trinitarian ontology of the church, see Roland Chia, ‘Trinity and Ontology: Colin Gunton’s Ecclesiology’, *International Journal of Systematic Theology* 9 (2007), pp. 452–68. For related approaches, see Jörg Baur, ‘Die Trinitätslehre als Summe des Evangeliums’, *Kerygma und Dogma* 22 (1976), pp. 122–31; T.F. Torrance, *The Trinitarian Faith* (Edinburgh: T&T Clark, 1987); and Colin E. Gunton, *The Promise of Trinitarian Theology* (Edinburgh: T&T Clark, 1991). For some concerns about this kind of approach, see Richard Fermer, ‘The Limits of Trinitarian Theology as Methodological Paradigm’, *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 41 (1999), pp. 158–86.

³ Christoph Schwöbel, ‘Die Trinitätslehre als Rahmentheorie des christlichen Glaubens’, in *Gott in Beziehung. Studien zur Dogmatik* (Tübingen: Mohr Siebeck, 2002), pp. 25–51.

⁴ John Webster, ‘*Non ex aequo*: God’s Relation to Creatures’, in Anthony Clarke and Andrew Moore, eds., *Within the Love of God: Essays on the Doctrine of God in Honor of Paul S. Fiddes* (Oxford: Oxford University Press, 2014), p. 97. Webster notes that the doctrine of creation is a further example of such a ‘distributed doctrine’.

⁵ John Webster, *Holy Scripture: A Dogmatic Sketch* (Cambridge: Cambridge University Press, 2003), p. 43. For further discussion of this approach, see Fred Sanders, ‘Holy Scripture under the Auspices of the Holy Trinity: On John Webster’s Trinitarian Doctrine of Scripture’, *International Journal of Systematic Theology* 21 (2019), pp. 4–23.

More recently, there has been growing interest in the notion of a ‘trinitarian metaphysics’ or ‘trinitarian ontology’.⁶ The attempt to develop an ontology that is fundamentally ‘trinitarian in content’⁷ is evident in Gunton’s writings of the 1990s, but has been given a new emphasis through John Milbank’s genealogical analysis of the crisis of modernity, and its proposed solution through a trinitarian ontology.⁸ Other important discussions include how the doctrine of the Trinity might be framed within the context of George Lindbeck’s influential yet problematic ‘cultural-linguistic’ approach to doctrine.⁹

This article, however, focuses specifically on a gap in this significant conversation, which clearly needs consideration – namely, the trinitarian aspects of the parallels between theological and scientific attempts to represent complex realities.¹⁰ Although there are some excellent discussions in the literature concerning how certain theologians with strong trinitarian

⁶ John Milbank is a particularly important advocate of such an approach: see, for example, Christiane Alpers, ‘Knowing God beyond Imagining: A Critical Appraisal of the Relation between Systematic Theology and Concrete Reality in John Milbank’s Thought’, *Modern Theology* 33 (2017), pp. 511–28; and King-Ho Leung, ‘Transcendentalism and the Gift: On Gunton, Milbank, and Trinitarian Metaphysics’, *Modern Theology* 38 (2022), pp. 81–99.

⁷ Gunton, *The One, The Three and The Many*, p. 139. For further discussion, see Christoph Schwöbel, ‘The Shape of Colin Gunton’s Theology: On the Way towards a Fully Trinitarian Theology’, in Lincoln Harvey, ed., *The Theology of Colin Gunton* (London: T&T Clark, 2010), pp. 182–208. Note especially, p. 198, Schwöbel’s reference to a ‘integration of all theological doctrines into the “frame” of Trinitarian Theology’.

⁸ John Milbank, *Theology and Social Theory: Beyond Secular Reason* (Oxford: Blackwell, 1990). Leung’s perceptive analysis of the divergence between Milbank and Gunton merits close study: Leung, ‘Transcendentalism and the Gift’, especially pp. 92–7. For concerns about the historical reliability of Milbank’s historical analysis, see Paul DeHart, *Aquinas and Radical Orthodoxy: A Critical Inquiry* (London: Routledge, 2014); and Daniel P. Horan, *Postmodernity and Univocity: A Critical Account of Radical Orthodoxy and Duns Scotus* (Minneapolis: Fortress Press, 2014).

⁹ See, for example, William C. Placher, *The Triune God: An Essay in Postliberal Theology* (Louisville, KY: Westminster John Knox Press, 2007). For an assessment of Lindbeck’s approach, see Kevin J. Vanhoozer, *The Drama of Doctrine: A Canonical-Linguistic Approach to Christian Theology* (Louisville, KY: Westminster John Knox Press, 2005), pp. 95–100; and Paul J. DeHart, *The Trial of the Witnesses: The Rise and Decline of Postliberal Theology* (Oxford: Blackwell, 2006). For my own historical critique of Lindbeck’s approach, see Alister E. McGrath, *The Genesis of Doctrine: A Study in the Foundations of Doctrinal Criticism* (Oxford: Blackwell, 1990).

¹⁰ For an excellent discussion of ‘modeling’ such realities in science and theology, see William Wood, ‘Modeling Mystery’, *Scientia et Fides* 4 (2016), pp. 39–59.

commitments engage and appropriate the natural sciences,¹¹ there has been surprisingly little interaction between theological discussions of the Trinity and the philosophy of the natural sciences.¹² This article seeks to address this deficiency, by opening up an important but often overlooked question that emerges from a critical conversation between trinitarian theology and the philosophy of science – namely, whether the doctrine of the Trinity is to be seen as a useful framework for holding together the multiple evidential elements that are traditionally seen as underlying this doctrine, or as an affirmation of the way things really are, so that we can, however cautiously, speak of a trinitarian ontology or metaphysics.

While this can be framed within wider contemporary theological debates about the relation of abstract thought and concrete reality,¹³ it is more helpfully approached in the light of parallel debates in the philosophy of science. Although there are some clear convergences between the philosophy of science and theology, there are some significant divergences that must be taken into account in conversations between these disciplines.¹⁴ For example, many note that the capacity of scientific theories to predict novel observations has no real parallel in theology. Yet in some scientific situations, prediction is impossible – as, for example, in the case of Darwin's theory of natural

¹¹ For example, Joanna Leidenhag, 'Two Accounts of Scientific Trinitarian Theology: Comparing Wolfhart Pannenberg's and T.F. Torrance's Theological Methodology', *Heythrop Journal* 57 (2016), pp. 935–49. For the interaction of trinitarian reflection and psychology in the Middle Ages, see the magisterial account of Russell L. Friedman, *Intellectual Traditions at the Medieval University: The Use of Philosophical Psychology in Trinitarian Theology among the Franciscans and Dominicans, 1250–1350*, 2 vols. (Leiden: Brill, 2013).

¹² A rare example of such interaction, which has had little impact on wider theological discussion, can be seen in John C. Polkinghorne, *Science and the Trinity: The Christian Encounter with Reality* (New Haven: Yale University Press, 2006). Note also the comments in K. Helmut Reich, 'The Doctrine of the Trinity as a Model for Structuring the Relations between Science and Theology', *Zygon* 30 (1995), pp. 383–405.

¹³ For Milbank's engagement with Henri de Lubac on this general theme, see John Milbank, *The Suspended Middle: Henri de Lubac and the Debate Concerning the Supernatural* (London: SCM Press, 2005), pp. 4–6; 78–80. For Milbank, de Lubac effectively develops a 'non-ontology'. For an alternative reading of de Lubac, see Hans Boersma, 'Nature and the Supernatural in *la nouvelle théologie*: The Recovery of a Sacramental Mindset', *New Blackfriars* 93 (2012), pp. 34–46. For the criticism developed by de Lubac and others (such as Hans Urs von Balthasar and M.-D. Chenu) of scholastic approaches to the nature – supernature divide, see Hans Boersma, *Nouvelle Théologie and Sacramental Ontology: A Return to Mystery* (Oxford: Oxford University Press, 2009), pp. 86–148.

¹⁴ For a detailed account, see Alister E. McGrath, *The Territories of Human Reason: Science and Theology in an Age of Multiple Rationalities* (Oxford: Oxford University Press, 2021).

selection, which is generally understood as an explanation of past historical contingencies.¹⁵ For the theologian, this is best seen as a reflection of each academic discipline being adapted to its specific field of study, so that criteria of validation appropriate for the natural sciences are not necessarily appropriate for Christian theology.¹⁶

This article proposes a distinction, without implying a separation, between envisaging the Trinity as a *coordinating framework*, a mental creation located within the mind of the interpreter, which gathers together and coordinates the multiple elements of the biblical witness to God; and as an *ontic reality*, independent of the human interpretative agent, and grounded in the nature and being of God. These two approaches – namely, envisaging the Trinity as an ‘intellectual construct’ and an ‘ontological reality’ – are, it must be stressed, not mutually exclusive; indeed, as we shall see, there are excellent grounds for considering that they are interconnected. Nevertheless, it is important to distinguish between these two approaches, and to come to appreciate their respective characters and merits.

This article frames this discussion as paralleling the traditional distinction within the philosophy of science between ‘instrumentalist’ and ‘realist’ accounts of scientific theories. Although the boundaries between these two theoretical approaches are fluid and contested, the former is generally understood as regarding theories as intellectual structures or frameworks that provide adequate accounts of what is observed and holding these together in an imaginatively plausible manner; the latter, however, sees theories as approximations of universal truths about ontic reality, which have a significant degree of correlation with the actual structures of the real world. We will explore this further in the following section.

Scientific theories: useful fictions or disclosures of a deeper reality?

The philosopher of science Wesley Salmon has long argued for a distinction between *epistemic* and *ontic* accounts of scientific explanation. The former holds that explanation is concerned with making phenomena understandable, predictable or intelligible by the development of an interpretative framework within the mind of an observer; the latter holds that explanation involves

¹⁵ Christopher Hitchcock and Elliott Sober, ‘Prediction versus Accommodation and the Risk of Overfitting’, *British Journal for Philosophy of Science* 55 (2004), pp. 1–34.

¹⁶ Alister E. McGrath, ‘Theologie als Mathesis Universalis? Heinrich Scholz, Karl Barth, und der wissenschaftliche Status der christlichen Theologie’, *Theologische Zeitschrift* 62 (2007), pp. 44–57.

identifying ontic structures in the external world which are responsible for the production of phenomena that require to be explained.¹⁷

Salmon's reflections open up the important question of whether theories – scientific or theological – are to be seen simply as convenient epistemic frameworks within the mind of the observer that are useful for organizing observations, or as fundamental statements about the nature of reality that go beyond what is observed. This question is regularly engaged in the philosophy of science, and is often framed in terms of the distinction between an *instrumentalist* and a *realist* understanding of scientific models and theories.¹⁸ There are two distinct – though, it must be stressed, potentially interconnected¹⁹ – ways of interpreting our observations of the world.²⁰ The debate between instrumentalist and realist accounts of scientific knowledge production involves questions of definition, procedure and evaluation that cannot be fully engaged in this brief discussion. However, exploring the ways in which these are generally understood can be helpful in illuminating theological possibilities, without requiring resolution of contemporary debates in the philosophy of science.

¹⁷ See, for example, Wesley C. Salmon, *Scientific Explanation and the Causal Structure of the World* (Princeton: Princeton University Press, 1984). For discussion of these two categories of explanation, and how they might be held together, see Phyllis Illari, 'Mechanistic Explanation: Integrating the Ontic and Epistemic', *Erkenntnis* 78 (2013), pp. 237–55; and Benjamin Sheredos, 'Re-Reconciling the Epistemic and Ontic Views of Explanation', *Erkenntnis* 81 (2016), pp. 919–49.

¹⁸ There is a large literature on these topics, made more complex by divergence about how these terms are to be understood. The discussion I here present is simplified for the specific purposes of this article, and needs careful qualification in the light of the technical scholarly debates, which cannot be fully engaged here. For some helpful reflections, see Alison Wylie, 'Arguments for Scientific Realism: The Ascending Spiral', *American Philosophical Quarterly* 23 (1986), pp. 287–98; Peter Barker and Bernard Goldstein, 'Realism and Instrumentalism in Sixteenth-Century Astronomy: A Reappraisal', *Perspectives on Science* 6 (1998), pp. 232–58; Anjan Chakravartty, *A Metaphysics for Scientific Realism: Knowing the Unobservable* (Cambridge: Cambridge University Press, 2007), pp. 3–26; 183–211; Steven French, *The Structure of the World: Metaphysics and Representation* (Oxford: Oxford University Press, 2014); and Daniel Buckley, 'Varieties of Epistemic Instrumentalism', *Synthese* 198 (2020), pp. 9293–313.

¹⁹ For example, see John T. Cacioppo, Gün R. Semin and Gary G. Berntson, 'Realism, Instrumentalism, and Scientific Symbiosis: Psychological Theory as a Search for Truth and the Discovery of Solutions', *American Psychologist* 59 (2004), pp. 214–23.

²⁰ It must again be emphasized that the question of the nature and relationship of instrumentalism and realism is the subject of considerable disagreement within the literature. An excellent introduction to the issues can be found in Juha Saatsi, ed., *The Routledge Handbook of Scientific Realism* (London: Routledge, 2018). See further Theo A.F. Kuipers, *From Instrumentalism to Constructive Realism: On Some Relations between Confirmation, Empirical Progress, and Truth Approximation* (Dordrecht: Kluwer Academic, 2000).

Scientific *instrumentalism* generally holds that theories are best seen as useful tools which help us to organize a field of empirical observations, and predict what might happen under a given set of circumstances.²¹ Instrumentalism does not aim to discover truth but rather to generate intellectual structures that are useful frameworks for answering questions and solving problems in a specific field of discourse. On this approach, the primary concern is to create or construct an intellectual or imaginative framework that enfolds and correlates as many observations as possible.

Instrumentalism aims to ‘preserve the phenomena’ by developing a framework that affirms their individual importance and holds them together. This might take the form of ‘mathematical contrivances devised for the purpose of saving the phenomena’. Yet these ‘contrivances’ are not understood to have ontological or metaphysical entailments. For the French historian and philosopher of science Pierre Duhem, a theory ‘tells us absolutely nothing’ about ‘the very nature of things, or the realities hidden under the phenomena’.²² Rather, it offers a simplified or idealized general description of what is observed, which is potentially limited to a specific domain. ‘The hypotheses of physics are mere mathematical contrivances devised for the purpose of saving the phenomena.’²³ They are not ‘true’ descriptions of an unobservable reality asserted to lie beyond or behind the phenomena, but are rather useful frameworks for organizing observations.²⁴

An instrumentalist approach to scientific theory aims to construct convenient intellectual structures for predicting or collating *observable data*, rather than setting out to discern the *actual structures of the world*. Instrumentalism thus focuses on what is observed and experienced. The important issue is about preserving and organizing our observations or ‘sensible

²¹ Kuipers, *From Instrumentalism to Constructive Realism*; and P. Kyle Stanford, ‘Reading Nature: Realist, Instrumentalist, and Quietist Interpretations of Scientific Theories’, in Lawrence Sklar, ed., *Physical Theory: Method and Interpretation* (Oxford: Oxford University Press, 2014), pp. 94–126.

²² Pierre Duhem, *The Aim and Structure of Physical Theory* (Princeton: Princeton University Press, 1991), p. 19.

²³ Pierre Duhem, *To Save the Phenomena: An Essay on the Idea of Physical Theory from Plato to Galileo* (Chicago: University of Chicago Press, 1985), p. 117. For some critical reflections on Duhem’s approach, see Sonia Maria Dion, ‘Pierre Duhem and the Inconsistency between Instrumentalism and Natural Classification’, *Studies in History and Philosophy of Science* 44 (2013), pp. 12–19.

²⁴ Peter Achinstein, ‘Atom’s Empirical Eve: Methodological Disputes and How to Evaluate Them’, *Perspectives on Science* 15 (2007), pp. 359–90; quote at p. 373. See further Michela Massimi, ‘Galileo’s Mathematization of Nature at the Crossroad between the Empiricist and the Kantian Tradition’, *Perspectives on Science* 18 (2010), pp. 152–88.

experiences', with a view to stimulating further research or predicting the behavior of systems in the future.²⁵

This approach is found in Andreas Osiander's famous preface to Nicolaus Copernicus' landmark work *On the Revolution of Heavenly Bodies* (1543), in which he suggested that the heliocentric theory was best seen as a helpful way of visualizing reality, consistent with scientific observations, which was useful for astronomical calculations, but did not necessarily correspond to the actual structure of the solar system.²⁶ For Osiander and most sixteenth-century astronomers, Copernicus's hypothesis was an arbitrary geometrical instrument that helped coordinate the observations of astronomers.²⁷ It was simply an intellectual construct, a model of reality, a way of visualizing the solar system which 'preserved the phenomena'. Fictitious entities can thus have an explanatory capacity.²⁸ Yet while instrumentalism holds that theories are best conceived as 'tools or instruments we use to make our way in the world', this does not compete with or exclude 'the possibility that those same cognitive entities might be true'.²⁹

In contrast, traditional scientific *realism* attempts to move from observations about the world to the 'realities hidden under the phenomena' (Duhem), developing an ontology of individual objects and properties in scientific theories.³⁰ How does the actual structure of reality enable us to understand the plurality of scientific observations concerning the world?

²⁵ For the importance of this practice of 'saving the phenomena' in early astronomical theorization, see B.R. Goldstein, 'Saving the Phenomena: The Background to Ptolemy's Planetary Theory', *Journal for the History of Astronomy* 28 (1997), pp. 2–12.

²⁶ Owen Gingerich, 'From Copernicus to Kepler: Heliocentrism as Model and as Reality', *Proceedings of the American Philosophical Society* 117 (1973), pp. 513–22. For a more nuanced reading of this preface, see Geoffrey Blumenthal, 'Diplomacy, Patronage, and the Preface to *De Revolutionibus*', *Journal for the History of Astronomy* 44 (2013), pp. 75–92.

²⁷ Nienke W.J. Roelants, 'The Physical Status of Astronomical Models Before the 1570s: The Curious Case of Lutheran Astronomer Georg Joachim Rheticus', *Theology and Science* 10 (2012), pp. 367–90.

²⁸ See, for example, Alisa Bokulich, 'How Scientific Models can Explain', *Synthese* 180 (2011), pp. 33–45; and Alisa Bokulich, 'Distinguishing Explanatory from Nonexplanatory Fictions', *Philosophy of Science* 79 (2012), pp. 725–37.

²⁹ P. Kyle Stanford, 'Instrumentalism: Global, Local, and Scientific', in Paul Humphreys, ed., *The Oxford Handbook of Philosophy of Science* (Oxford: Oxford University Press, 2016), p. 323.

³⁰ For a cogent statement of this position, see Stathis Psillos, *Scientific Realism: How Science Tracks Truth* (London: Routledge, 1999).

Realism, as this is generally understood,³¹ holds that scientific theories depend on two assumptions: that an external reality exists beyond or behind what is observed, and that the human mind is somehow able to copy or represent this external reality adequately, if not necessarily comprehensively. This view is widespread within the physical sciences; physicists ‘often generally feel that what they are trying to do, and to some degree successfully, is to get a “handle on reality”’.³² The physicist and theologian John Polkinghorne takes this position. He writes:

The naturally convincing explanation of the success of science is that it is gaining a tightening grasp of an actual reality. The true goal of scientific endeavor is understanding the structure of the physical world, an understanding which is never complete but ever capable of further improvement. The terms of that understanding are dictated by the way things are.³³

Polkinghorne here echoes the views of the philosopher Hilary Putnam, who argues that a presumed realism is the best defense of scientific explanation. ‘The positive argument for realism is that it is the only philosophy that does not make the success of science a miracle.’³⁴ Or, to put this another way, ‘if the theory was not true, then it would be a miracle that it was capable of generating successful predictions and enabling us to gain control over our environment’.³⁵ Many would argue that the best way of making sense of the world is an explanation grounded primarily upon its ontic structures, offering a truthful account of the nature of reality.³⁶ The Finnish philosopher of science Ilkka Niiniluoto thus declares that ‘for the realist, the truth of a theory is a precondition for the adequacy of scientific explanations’.³⁷

³¹ However, note the cautionary comment of Wenceslao Gonzalez: given ‘the variety of realist approaches to science and the large number of options now available’, it is not easy to identify any core beliefs that are shared by all forms of ‘scientific realism’. Wenceslao J. Gonzalez, ed., *New Approaches to Scientific Realism* (Berlin: De Gruyter, 2020), p. 5.

³² Michael Redhead, *From Physics to Metaphysics* (Cambridge: Cambridge University Press, 1995), p. 9.

³³ John Polkinghorne, *One World: The Interaction of Science and Theology* (London: SPCK, 1986), p. 22.

³⁴ Hilary Putnam, *Mathematics, Matter and Method: Philosophical Papers* (Cambridge: Cambridge University Press, 1975), p. 73.

³⁵ Hilary Putnam, ‘Realism and Reason’, in *Meaning and the Moral Sciences* (London: Routledge and Kegan Paul, 1978), pp. 123–38.

³⁶ David Deutsch, *The Fabric of Reality: The Science of Parallel Universes – and Its Implications* (London: Penguin, 1997), pp. 95–6. For a critical evaluation of this position, see John N. Wright, *An Epistemic Foundation for Scientific Realism: Defending Realism without Inference to the Best Explanation* (Cham, Switzerland: Springer, 2018), pp. 79–115.

³⁷ Ilkka Niiniluoto, *Critical Scientific Realism* (Oxford: Oxford University Press, 2002), p. 167.

A realist approach to science thus respects and ultimately depends upon observations – but it sees these as a gateway to grasping ‘how things stand in parts or aspects of the world about which it is otherwise quite difficult to get information’.³⁸ The epistemic task is to discern and grasp, to the extent that this is possible, the unobserved (and potentially unobservable) ontological unity that lies behind a plurality of observations and experiences. Isaac Newton, for example, proposed the concept of gravity to account for his observations of falling apples and planetary movements, knowing that this notion was profoundly counterintuitive and that it could not be observed. Yet Newton was clear that the best explanation of what could be observed lay in proposing something that could *not* itself be observed.³⁹

It is thus important to return to the different concepts of ‘explanation’ that are associated with instrumentalist and realistic approaches. Explanation is, in general, ‘an epistemic practice of making the world more intelligible’.⁴⁰ But what forms of explanation are associated with each of these two perspectives? According to Salmon, the ‘ontic’ or realistic view holds that explanation is essentially the identification of the ontic structures in the world which are responsible for the production of observed phenomena, whereas the epistemic or instrumentalist view holds that explanation is concerned with making observed phenomena predictable or intelligible.⁴¹ Instrumentalism thus locates explanation in the creation of a plausible intellectual framework that is able to achieve the best coordination of observations; realism locates explanation in disclosing the unobserved ontic structures of reality which lie behind or cause such observations.

The interconnectedness of instrumentalism and realism

While the instrumentalist and realist approaches may certainly (and helpfully) be distinguished, there is an emerging consensus that a ‘good’ explanation is one that fulfills both epistemic and ontic norms.⁴² It is therefore important to note the historical point that many originally instrumentalist understandings of

³⁸ Stanford, ‘Reading Nature: Realist, Instrumentalist, and Quietist Interpretations of Scientific Theories’, p. 97.

³⁹ For an outstanding account of this process of argument, see William L. Harper, *Isaac Newton's Scientific Method: Turning Data into Evidence About Gravity and Cosmology* (Oxford: Oxford University Press, 2014). For Newton, the crucial philosophical question was how to ‘discover the forces of nature from the phenomena of motions’ – in other words, to proceed what from could be observed (‘phenomena of motions’) to the deeper principles towards which they pointed (‘forces of nature’) – such as gravity.

⁴⁰ Cory Wright and William Bechtel, ‘Mechanisms and Psychological Explanation’, in Paul Thagard, ed., *Philosophy of Psychology and Cognitive Science* (New York: Elsevier, 2007), p. 51.

⁴¹ Salmon, *Scientific Explanation and the Causal Structure of the World*.

⁴² See, for example, Phyllis Illari, ‘Mechanistic Explanation: Integrating the Ontic and Epistemic’, *Erkenntnis* 78 (2013), pp. 237–55.

scientific theories have transmuted into realist understandings with the passing of time. A theory might initially be seen to have a purely colligatory or heuristic utility in bringing and holding together a wide range of observations; yet over time, the theory's capacity to function in this way was gradually realized to rest on its ontological foundations.

We see this process of connecting the epistemic and ontic domains taking place in the gradual reassessment of Copernicus's heliocentric model of the solar system, in which what was initially seen as a useful 'mathematical contrivance' was reclassified or reframed as a truthful statement about the deeper structures of the real world.⁴³ The epistemic utility of the theory was found to rest on its ontic foundations. Initially, many scientists and non-scientists interpreted the Copernican heliocentric theory *instrumentally* as a calculating device, believing that there were too many problems with Copernicus' approach to allow it to be seen as 'real'. Yet with the development of Galilean and Newtonian physics and the new observational data that became available through the invention of the telescope, the heliocentric theory began to be interpreted *realistically*, rather than *instrumentally*.⁴⁴ It was not merely a convenient way of thinking about the solar system, or a hypothetical framework that enabled certain useful mathematic calculations to be performed. The solar system really was heliocentric. The sustained capacity of an imagined way of thinking about the world to 'preserve the phenomena' was an indication (though not a proof) of its truthfulness.

Perhaps the most familiar example of this transformation can be seen in Albert Einstein's famous 1905 paper entitled 'On a Heuristic Point of View Concerning the Production and Transformation of Light',⁴⁵ which offered an explanation of the enigmas of the photoelectric effect using the concept (though not the specific term) of a 'photon', which somehow combined the properties of waves and particles, hitherto assumed to be incompatible.⁴⁶ Einstein initially proposed this as a heuristic device, without ontological entailments – yet subsequent researchers found it so persuasive that it became

⁴³ Robert S. Westman, *The Copernican Question: Prognostication, Skepticism, and Celestial Order* (Berkeley: University of California Press, 2011), pp. 109–69; and Nienke W.J. Roelants, 'The Physical Status of Astronomical Models before the 1570s: The Curious Case of Lutheran Astronomer Georg Joachim Rheticus', *Theology and Science* 10 (2012), pp. 367–90.

⁴⁴ Mario Bagioli, 'Stress in the Book of Nature: The Supplemental Logic of Galileo's Realism', *Modern Language Notes* 118 (2003), pp. 557–85.

⁴⁵ Albert Einstein, 'Über einen die Erzeugung und Verwandlung des Lichtes betreffenden heuristischen Gesichtspunkt', *Annalen der Physik* 17 (1905), pp. 132–48.

⁴⁶ For a full analysis of the issues, see Klaus Hentschel, *Photons: The History and Mental Models of Light Quanta* (Cham, Switzerland: Springer, 2018). For the first use of this term, see Gilbert N. Lewis, 'The Conservation of Photons', *Nature* 118 (1926), pp. 874–75; cf. Hentschel, *Photons*, pp. 119–21.

widely accepted, not merely as an epistemic postulate but as an ontic truth. The epistemic and ontic aspects of a good theory were thus seen to be entangled and interconnected. There is an increasing openness towards bringing together the insights of scientific realism and scientific instrumentalism in ‘an iterative, integrative fashion to guide theory and research’.⁴⁷ One approach focuses on experience and observation, encouraging attentiveness towards the complexity and plurality of the world; the other focuses on discerning the fundamental unity of this world, which ultimately renders its complexity and plurality intelligible.

From what has been said, it is not difficult to see that this important (though contested) distinction between instrumentalist and realist understandings of scientific models and theories has relevance to our reflections on the doctrine of the Trinity. Having briefly explored this distinction in the philosophy of science, we may now turn to consider how this might be illuminating theologically.

The trinity as an intellectual construct

The predominant view within systematic theology today is that the doctrine of the Trinity is primarily to be seen as a theory of the way God really is,⁴⁸ whose power to explain goes beyond the explicit statements of the Bible, while nevertheless providing a satisfactory coordination of such statements.⁴⁹ The historical evolution of this doctrine in early Christianity involved critical reflection on the relationship of how things are to be *conceived*, and how they are really *are*,⁵⁰ seeking for an ontological foundation which might hold together

⁴⁷ Cacioppo, Semin and Berntson, ‘Realism, Instrumentalism, and Scientific Symbiosis’, p. 221.

⁴⁸ For Augustine’s understanding of the relation of Trinity and ontology, see Luigi Gioia, *The Theological Epistemology of Augustine’s De Trinitate* (Oxford: Oxford University Press, 2008), pp. 147–68.

⁴⁹ Holmes wisely cautions that in the modern trinitarian revival, ‘we returned to the Scriptures, but we chose (with Tertullian’s *Praxeas*, Noetus of Smyrna, and Samuel Clarke) to focus exclusively on the New Testament texts, instead of listening to the whole of Scripture with Tertullian, Hippolytus, and Daniel Waterland’. Stephen R. Holmes, *The Holy Trinity: Understanding God’s Life* (Milton Keynes: Paternoster, 2012), p. 200. For a more detailed discussion of this point, see Fred Sanders, ‘Redefining Progress in Trinitarian Theology: Stephen R. Holmes on the Trinity’, *Evangelical Quarterly* 86 (2014), pp. 6–20, especially pp. 8–12. These points are also explored in C. Kevin Rowe, ‘Biblical Pressure and Trinitarian Hermeneutics’, *Pro Ecclesia* 11 (2002), pp. 295–312.

⁵⁰ Johannes Zachhuber, *The Rise of Christian Theology and the End of Ancient Metaphysics: Patristic Philosophy from the Cappadocian Fathers to John of Damascus* (Oxford: Oxford University Press, 2020), pp. 19–20. Zachhuber notes in particular the challenge posed in correlating the plurality of experience of God within an ‘ultimate ontological unity’.

the complex account of the Christian experience of God. A similar pattern of exploration can be seen in Athanasius's development of the doctrine of the incarnation to 'preserve the phenomena' of both the New Testament witness and the worship of the church by coordinating these elements in a coherent whole using the framework of the 'incarnation of the Word of God'.⁵¹ This raises the question of the interplay of an epistemic account of the doctrine of the Trinity and its ontological counterpart.

We begin by reflecting on what might be seen as 'instrumentalist' approaches to the doctrine, which treat this as an intellectual scaffolding or conceptual enclosure which enables a set of core biblical and doxological insights to be both affirmed and correlated. Some early Christian writers – such as Irenaeus of Lyons – present the Trinity in terms which avoid causal speculation, focusing primarily on the intellectual coordination of the elements of the economy of salvation.⁵² The older view that Irenaeus's trinitarian theology is *wholly* economic in nature, or that its economic emphasis somehow excludes or minimizes its ontological referents, has rightly been criticized for failing to contextualize Irenaeus's emphasis on economic activity of the Trinity within his more ontological account of the immanent relations of the Father, Son and Holy Spirit.⁵³ Yet it is important to note that Irenaeus's trinitarian formulations often *seem* to be instrumentalist, despite the ontic foundation that underlies them. While Irenaeus's second-century account of the Trinity may seem deficient in the light of the more developed theories of the fourth century, it must be respected on its own terms, in that it offers a way of thinking about the Trinity which was able to meet some of the objections raised by critics of Christianity at that time.

The idea that the doctrine of the Trinity offers a framework that colligates or integrates biblical insights is a commonplace in modern systematic theology. For example, Ernstpeter Maurer remarks that the doctrine of the Trinity represents 'an attempt to bring together the biblical statements about God in the briefest, most compact, and most appropriate form'.⁵⁴ Maurer's comments could be understood as essentially epistemic, referring to the need to create a mental framework or epistemic container that satisfactorily colligates these 'biblical statements'. Similarly, Emil Brunner held that the doctrine of the Trinity is a 'defensive doctrine (*Schutzlehre*)', a theological

⁵¹ For a good account of the theological dynamics of this process of reflection, see D. Glenn Butner, 'Probing the Exegetical Foundations of Consubstantiality: Worship, Mediatorial Figures, and the Homoeousion', *Modern Theology* 37 (2021), pp. 679–702.

⁵² See, for example, Denis Minns, *Irenaeus: An Introduction*, 2nd edn (New York: T&T Clark, 2010).

⁵³ See especially Jackson Lashier, *Irenaeus on the Trinity* (Leiden: Brill, 2014). Note also Anthony Briggman, *Irenaeus of Lyons and the Theology of the Holy Spirit* (Oxford: Oxford University Press, 2012).

⁵⁴ Ernstpeter Maurer, 'Trinitätslehre', *Glauben und Lernen* 17 (2002), pp. 11–23.

construct that is proper and necessary, in that it holds together and affirms the biblical witness to God, without itself being *necessarily* part of the Christian proclamation.⁵⁵

Yet neither Maurer nor Brunner hold that a recognition of the epistemic dimensions of the doctrine of the Trinity excludes acknowledging its ontic foundations. Indeed, many would argue that a trinitarian ontology ultimately underlies and shapes the structure of such a trinitarian interpretative framework. Christoph Schwöbel develops the idea of the Trinity as a ‘framework theory (*Rahmentheorie*)’, which is to be seen as the outcome of an ontological conception of the Trinity which holds together the ‘economic’ and the ‘immanent’ Trinity. He writes: ‘The doctrine of the Trinity functions as a framework theory for the development of the Christian faith’s understanding of reality by inviting us to relate all statements about humanity and the world to the identity of the Trinity and to the actions and nature of God in the Trinity.’⁵⁶ It is by grasping the concrete reality of a trinitarian ontology that it is possible to develop a coordinating framework that holds together the unity of God on the one hand, and the multiplicity of God’s actions in the world on the other.⁵⁷

The trinity as ontological reality

As we noted earlier, Irenaeus’s theology of the Trinity engaged some of the apologetic questions of the second century by developing an intellectual coordination of Father, Son and Holy Spirit through notions such as the ‘economy of salvation’ and Christ’s ‘recapitulation’ of its earlier elements.⁵⁸ Although Irenaeus’s emphasis falls upon the epistemic aspects of the matter, it is clear that there is an assumed ontological foundation for these reflections. During the fourth century, such an *intellectual* coordination of the elements of the ‘economy of salvation’ came increasingly to be grounded in what Johannes

⁵⁵ Emil Brunner, *Der Mittler: Zur Besinnung über den Christusglauben*, 4th edn (Zurich: Zwingli-Verlag, 1947), pp. 243–4. See also Emil Brunner, *Die christliche Lehre von Gott*. Dogmatik Band I (Zurich: Theologischer Verlag, 1946), pp. 240–4.

⁵⁶ Schwöbel, ‘Die Trinitätslehre als Rahmentheorie des christlichen Glaubens’, p. 48.

⁵⁷ Michael Roth, ‘Trinitätslehre als Rahmentheorie: Überlegungen zur Einheit Gottes in der Vielfalt seines Wirkens’, *Kerygma und Dogma* 49 (2003), pp. 52–66. Roth’s substantial ‘excursus’ on the doctrine of the Trinity should also be noted: Michael Roth, *Gott im Widerspruch? Möglichkeiten und Grenzen der theologischen Apologetik* (Berlin: Springer, 2002), pp. 107–43.

⁵⁸ The notion of ‘recapitulation’ serves as the base of Irenaeus’s arguments for the unity of God and the unity of Scripture. For this idea in Irenaeus, and its possible precedents, see Jacques Fantino, *La théologie d’Irénée: Lecture des Écritures en réponse à l’exégèse gnostique. Une approche trinitaire* (Paris: Éditions du Cerf, 1994), pp. 98–106; and Michael Schlusser, ‘How Much Did Irenaeus Learn from Justin?’, *Studia Patristica* 40 (2006), pp. 515–20, especially pp. 519–20.

Zachhuber terms an ‘*ontological* coordination’ of the persons of Father, Son and Spirit.⁵⁹

While some have expressed concerns about this development, particularly the tendency to see the Cappadocians as mascots of some kind of ‘onto-theological triumphalism’,⁶⁰ there is much interest on the part of systematic theologians in the retrieval of the trinitarian legacy of the early Christian period⁶¹ – for example, in exploring the relationship between the multiple works and manifestations of God and the ultimate reality of God, not least in navigating a viable solution to the problem of the ‘one and the many’.⁶² The acts of God within the ‘economy of salvation’ seem laden with ontological implications, which it is the task of theology to unfold and correlate.⁶³

Recent scholarship has recognized that early Christian theologians are best considered to be firmly located within the late antique intellectual world, and are to be seen as ‘philosophers’ in their own right. As Zachhuber notes, an inherent ‘dualistic tendency’ underlies the ‘conventional use of theology and philosophy as quasi-disciplinary designators’ – a distinction that dates to the rise of European universities during the Middle Ages, rather than the early Christian period.⁶⁴ Early Christian accounts of creation, Christology and the Trinity are now being reframed and relocated within the broad context of late ancient philosophical discussion, rather than being seen as distinct and disparate intellectual undertakings.⁶⁵ For Zachhuber, the theological programme of this influential group of bishops in Asia Minor, including Basil of Caesarea and Gregory of Nyssa, could be described as the development of a ‘Christian metaphysic’⁶⁶ – not, it must be stressed, consisting

⁵⁹ Zachhuber, *The Rise of Christian Theology and the End of Ancient Metaphysics*, pp. 17–71.

⁶⁰ Scot Douglas, *Theology of the Gap: Cappadocian Language Theory and the Trinitarian Controversy* (New York: Peter Lang, 2005), p. 276.

⁶¹ See, for example, Sarah Coakley, ‘Introduction: Disputed Questions in Patristic Trinitarianism’, *Harvard Theological Review* 100 (2007), pp. 125–38.

⁶² For this issue in the forms of Platonism in late classical antiquity, see Dmitri Nikulin, *Neoplatonism in Late Antiquity* (New York: Oxford University Press, 2019).

⁶³ A good example lies in Bruce McCormack’s elucidation of Barth’s judgment that God’s act of election has profound ontological significance. Bruce L. McCormack, ‘Grace and Being: The Role of God’s Gracious Election in Karl Barth’s Theological Ontology’, in *Orthodox and Modern: Studies in the Theology of Karl Barth* (Grand Rapids: Baker Academic, 2008), pp. 183–200.

⁶⁴ Zachhuber, *The Rise of Christian Theology and the End of Ancient Metaphysics*, p. 2. Cf. Christoph Marksches, *Christian Theology and its Institutions in the Early Roman Empire: Prolegomena to a History of Early Christian Theology* (Tübingen: Mohr Siebeck, 2015), pp. 1–29.

⁶⁵ See, for example, Charlotte Köckert, *Christliche Kosmologie und kaiserzeitliche Philosophie* (Tübingen: Mohr Siebeck, 2009); and George E. Karamanolis, *The Philosophy of Early Christianity* (London: Routledge, 2014).

⁶⁶ Zachhuber, *The Rise of Christian Theology and the End of Ancient Metaphysics*, p. 16.

of an amalgam of essentially independent disciplines of theology and philosophy, but rather as an expression of an integrated Christian philosophy of this period.⁶⁷

This growing emphasis on developing a ‘Christian metaphysic’ perhaps helps us to understand the increasing focus on understanding the Trinity in ontological terms, paralleling the growing use of the soteriological metaphor of deification as implying some form of ontological transformation within the believer.⁶⁸ Yet this does not call into question the role of the Trinity as an epistemic explanatory device, capable of colligating and coordinating the multiple aspects of the biblical witness; it rather places it on a more robust foundation, indicating that its explanatory or colligatory capacity is grounded in its correspondence with reality.

While there are some important parallels between the approach suggested in this article and Cathryn Mowry LaCugna’s view that the doctrine of the Trinity can be seen as a heuristic framework for thinking about God and ourselves,⁶⁹ the analysis set out here suggests that there is a creative and constructive interplay between the heuristic and dogmatic, the epistemic and ontic, which does not require us to choose one at the expense of the other, but rather – as in the natural sciences – to see them as two different manners of conceptualizing the Trinity, each of which can be adapted for certain particular goals.

It is important to note that there is a *parallel* – though not, it must be stressed, an *identity* – between the traditional distinction between economic and immanent accounts of the Trinity and instrumentalist and realist approaches to this doctrine. In general, the ‘immanent Trinity’ is generally understood to refer to the inner relationships within the Trinity; whereas the ‘economic Trinity’ broadly denotes the Trinity as this is understood to be active and revealed in creation, redemption and consummation, and the life of the Christian believer.⁷⁰ Both Karl Barth and Karl Rahner recognize a

⁶⁷ Zizioulas tends to present this process as a deliberate correction of an ontological deficiency in Scripture through the ontological permissiveness of Greek philosophy. See John Zizioulas, *Being as Communion: Studies on Personhood and the Church* (New York: St Vladimir’s Seminary Press, 1985), pp. 67–78.

⁶⁸ On which see Ben C. Blackwell, *Christosis: Pauline Soteriology in Light of Deification in Irenaeus and Cyril of Alexandria* (Tübingen: Mohr Siebeck, 2011); and Boris Maslow, ‘The Limits of Platonism: Gregory of Nazianzus and the Invention of *theōsis*’, *Greek, Roman, and Byzantine Studies* 52 (2012), pp. 440–68.

⁶⁹ Catherine Mowry LaCugna, *God for Us: The Trinity and Christian Life* (San Francisco: Harper & Row, 1992), pp. 378–9. For a critique of LaCugna, see Charles D. Raith, ‘*Ressourcing the Fathers? A Critical Analysis of Catherine Mowry LaCugna’s Appropriation of the Trinitarian Theology of the Cappadocian Fathers*’, *International Journal of Systematic Theology* 10 (2008), pp. 267–84.

⁷⁰ Fred Sanders, ‘Entangled in the Trinity: Economic and Immanent Trinity in Recent Theology’, *Dialog: A Journal of Theology* 40 (2001), pp. 175–82.

distinction between God's disclosure in the world of human observation and experience on the one hand, and the transcendent reality of God on the other, and offer important reflections on the interconnection of these two conceptions of the Trinity.⁷¹ My suggestion is that the distinction between 'instrumentalist' and 'realist' approaches to scientific knowledge is illuminating in this context, offering a framework that helpfully distinguishes yet coordinates 'the ontological correspondence of the economic Trinity to the immanent Trinity and the epistemological correspondence of the immanent to the economic Trinity'.⁷²

The distinction between an epistemic emphasis upon what God has done and the ontic emphasis on who God is can also be developed to explore the complex question of the 'unknowability' of God. While a full discussion of the apophatic dimensions of Trinitarianism lies beyond the scope of this article,⁷³ it will be clear that to know what God has done does not necessarily lead to a clear and distinct knowledge of the being of God.⁷⁴ An analogous point is made regularly in the philosophy of science, contrasting the relative certainty of a set of scientific observations and the uncertainty of our knowledge of the reality that lies behind and beyond them. Albert Einstein and Werner Heisenberg both emphasized that a set of known and reliable observations does not unequivocally or definitively disclose the transcendent reality that underlies them. The 'apophatic resonances' of Einstein's reflections on the universe are well known,⁷⁵ and are echoed by Heisenberg. While holding that a good scientific theory aims to 'do justice to every new experience, to every accessible domain of the world',⁷⁶ Heisenberg nevertheless noted that such theories struggle to cope with the 'bottomless depth' and 'impenetrable darkness' of the universe, placing limitations on the human intellectual struggle to represent it completely and reliably.⁷⁷

⁷¹ Cf. Chung-Hyun Baik, 'A Matrix of Ontology, Epistemology, and Mystery in Karl Barth and Karl Rahner on the Immanent–Economic Trinity Relation', *Theology Today* 75 (2018), pp. 297–317. Note also Baik's earlier work *The Holy Trinity – God for God and God for Us: Seven Positions on the Immanent–Economic Trinity Relation in Contemporary Trinitarian Theology* (Eugene, OR: Pickwick, 2011).

⁷² Baik, 'A Matrix of Ontology, Epistemology, and Mystery', p. 308.

⁷³ See the reflections of Karen Kilby, 'Is an Apophatic Trinitarianism Possible?', *International Journal of Systematic Theology* 12 (2010), pp. 65–77.

⁷⁴ A theme explored in Karolina Kochanczyk-Boninska and Tomasz Stepień, *Unknown God, Known in His Activities: Incomprehensibility of God During the Trinitarian Controversy of the 4th Century* (Frankfurt am Main: Peter Lang, 2018).

⁷⁵ John Hedley Brooke, 'If I Were God: Einstein and Religion', *Zygon* 41 (2006), pp. 941–54. Note especially his remark, p. 953, that Einstein subscribed to an 'apophatic logic in which the transcendent is ultimately indescribable'.

⁷⁶ Werner Heisenberg, *Die Ordnung der Wirklichkeit* (Munich: Piper, 1989), pp. 38–52.

⁷⁷ Heisenberg, *Die Ordnung der Wirklichkeit*, p. 44.

Reflections on spirituality and pedagogy

This article has argued that two general trinitarian projects can be discerned within the Christian tradition, corresponding broadly to what we have identified as ‘instrumental’ and ‘realist’ approaches within the philosophy of science. The realistic approach, grounded in a trinitarian ontology, is clearly the dominant approach in contemporary systematic theology. Yet it is important to appreciate that an instrumentalist approach is not inconsistent with a more developed trinitarian metaphysics; indeed, its capacity to explain and inform can be argued to be grounded in a trinitarian ontology. This does not mean that an instrumentalist approach is redundant; it is rather to encourage an exploration of its own distinct voice and tone, which allow it to fulfill some significant contemporary theological tasks in a helpful way. An instrumentalist approach tends to focus on the particularities of many individual phenomena, enabling these to be enumerated and individually appreciated; a realist approach tends to focus on the ontological basis of those phenomena, which ultimately grounds and coordinates them. Together, they allow us to hold together the many and the one.

I have already suggested that this distinction between instrumental (or epistemic) and realist (or ontic) approaches to the Trinity helps frame a theological discussion of the quest for unity and coherence in our experience of God. Yet in concluding these reflections, it seemed important to note some ways in which an ‘instrumentalist’ approach to the Trinity has its own distinct theological utility. I shall reflect briefly on two aspects of this approach, which I believe are constructive applications of its distinct focus.

Spirituality

Spirituality can helpfully be described as ‘the lived experience of Christian faith, which is an ongoing project of life integration in the context of, in response to, and in terms of the revelation of God in Jesus Christ’.⁷⁸ This points to the need for attentiveness to the richness and complexity of God’s self-disclosure. The early Irish *Lorica* tradition points to how the doctrine of the Trinity was used to weave together a wide range of biblical and theological threads without their intellectual integration. The issue was clearly to ‘preserve the phenomena’ – that is, to identify, respect and appreciate each individual statement concerning God’s presence and activity within the world and the life of the believer, with the doctrine of the Trinity functioning as a coordinating framework to ensure that each could be grasped and appreciated. The agenda here was to heighten the believer’s appreciation of who God is, and what God does.

⁷⁸ Sandra M. Schneiders, ‘Biblical Spirituality’, *Interpretation* 70 (2016), p. 417.

Many early Irish poems, hymns and prayers were inspired by the biblical metaphor of the *lorica fidei* (the ‘breastplate of faith’, 1 Thess. 5:8) or the *lorica iustitiae* (the ‘breastplate of righteousness’, Eph. 6:14).⁷⁹ Perhaps the most famous of these is that attributed to Patrick, widely known as ‘St Patrick’s Breastplate’.⁸⁰ This poem invokes the ‘strong power’ of the Trinity, setting out explicitly and concretely what this vision of God enfolds and affirms. For example, the section dealing with the created order invokes the protection and presence of the God who created ‘the light of the Sun, the whiteness of Snow, the force of Fire, the flashing of lightning, the velocity of Wind, the depth of the Sea, the stability of the Earth, the hardness of Rocks’.⁸¹

Through clearly not a creedal document, this remarkable poem can be read as a trinitarian framing of the works of God in creation, redemption, providence and consummation. It was written, not with the primary intention of constructing a trinitarian ontology, but rather to unfold and enumerate a set of evocative images of divine action and presence that would elicit and encourage believers’ trust in the ‘strong power’ of this God.⁸² This kind of instrumentalist concern for identifying and correlating phenomena encourages the attentive observation of the world, which both inspires curiosity and a desire to expand this vision of nature through theoretical reflection.⁸³ ‘Whereas the perspective of scientific realism fosters theoretical specification, empiricism, verification, discrimination, and warfare between competing theories, the perspective of scientific instrumentalism promotes open-mindedness, creativity, integration, consilience, and problem-solving.’⁸⁴ Perhaps it is no accident that one of the most distinctive features of Celtic spirituality is its emphasis on the capacity of the natural world to point towards God.⁸⁵

⁷⁹ For a helpful discussion, see Jennifer Reid, ‘The Lorica of Laidcenn: The Biblical Connections’, *Journal of Medieval Latin* 12 (2002), pp. 141–53.

⁸⁰ For an English translation of the old Irish text of this poem, see James Henthorn Todd, *St. Patrick, Apostle of Ireland: A Memoir of his Life and Mission* (Dublin: Hodges, Smith, and Co., 1864), pp. 426–9.

⁸¹ Todd, *St. Patrick*, p. 427.

⁸² Although a fifth-century early Irish Christianity semi-creedal work, regarded as an authentic work of Patrick, patron saint of Ireland, makes reference to a ‘measure of faith in the Trinity (*mensura . . . fidei trinitatis*)’, the work contains no *explicit* discussion of this doctrine. See Tarmo Toom, ‘What is St Patrick’s ‘Creed’?’, *Irish Theological Quarterly* 79 (2014), pp. 3–13, especially pp. 4–6.

⁸³ Lorraine Daston, ‘The Empire of Observation’, in Lorraine Daston and Elizabeth Lunbeck, eds., *Histories of Scientific Observation* (Chicago: University of Chicago Press, 2011), pp. 81–113.

⁸⁴ Cacioppo, Semin and Berntson, ‘Realism, Instrumentalism, and Scientific Symbiosis’, p. 217.

⁸⁵ See, for example, J. Philip Newell, *The Book of Creation: An Introduction to Celtic Spirituality* (London: Canterbury Press, 2004).

Theological pedagogy

The themes explored in this article are also important pedagogically in relation to teaching about the Trinity.⁸⁶ It is well known that many Christians find many more formal and technical presentations of this doctrine to be perplexing, preferring to think in terms of the simpler language of the Christian Bible. What I have here referred to as ‘instrumentalist’ approaches to the Trinity have significant potential in this context, in that their starting point is pedagogically secure and accessible for many. An excellent example of the use of this approach is found in Martin Luther’s catechisms of 1529. Although Luther’s more theological writings display a trinitarian sophistication,⁸⁷ his catechisms were works of popular theology which retained both the language and structure of biblical formulations, setting out the basic themes which, when woven together, constitute the Christian doctrine of the Trinity.⁸⁸ Luther’s strategy in these writings is to set out these multiple biblical insights and themes without recourse to abstract ontotheological speculation. These are the phenomena which are coordinated by and integrated within the doctrine of the Trinity.

To illustrate this approach, we may consider the section of Luther’s *Greater Catechism* dealing with the Third Article – the Holy Spirit – which sets out a trinitarian framework for enfolding these fundamental themes without using its technical vocabulary or conceptualities:

Here you have everything in abundance. For here [God] has revealed himself, and revealed the deepest recess of his fatherly heart and completely unutterable love in all three articles. For he created us in order to redeem and sanctify us, and having given us everything in heaven and on earth, he even gave us his Son and Holy Spirit, through which he brought us to himself.

⁸⁶ For some of the issues, see Russell Thorp, ‘The Doctrine of the Trinity and Christian Education’, *Melanesian Journal of Theology* 14 (1998), pp. 28–44; Kathryn Tanner, ‘The Trinity as Christian Teaching’, in Gilles Emery and Matthew Levering, eds., *The Oxford Handbook of The Trinity* (New York: Oxford University Press, 2011), pp. 349–58; and Lewis Ayres, ‘The Trinity and the Life of the Christian: A Liturgical Catechism’, *New Blackfriars* 92 (2011), pp. 3–17.

⁸⁷ For some important studies, see Pekka Kärkkäinen, *Luthers trinitarische Theologie des Heiligen Geistes* (Mainz: Philipp von Zabern, 2005); Mickey L. Mattox, ‘From Faith to the Text and Back Again: Martin Luther on the Trinity in the Old Testament’, *Pro Ecclesia* 15 (2006), pp. 281–30; and Christine Helmer, *The Trinity and Martin Luther*, rev. edn (Bellingham, WA: Lexham Press, 2017).

⁸⁸ For reflections on Luther’s approach, see Christoph Schwöbel, ‘Einfach Gott: Trinitätstheologie am Anfang des 21. Jahrhunderts’, *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 62 (2020), pp. 519–41, especially pp. 531–40. Schwöbel rightly points out that Luther’s concept of the Trinity undergirds and coordinates the core Reformation affirmations – *solus Christus, sola gratia, sola fide, sola scriptura* – all of which ‘are based on the understanding of the Trinitarian self-giving’.

For we can never come to know the Father's steadfast love and grace other than through the Lord Christ, who is a mirror of the father's heart, apart from whom we see nothing but an angry and terrible judge. But we could not know anything about Christ unless it were revealed by the Holy Spirit.⁸⁹

Luther's approach facilitates the correlation of the doctrine of the Trinity with the biblical themes which it seeks to safeguard and enfold, making it pedagogically easier to ascend from the imagery and language of the Bible to the more complex conceptualities and language of the doctrine of the Trinity, without reducing the doctrine of the Trinity to any of these biblical affirmations – a matter of no small importance in preaching about the Trinity.⁹⁰

Conclusion

In this article, we have drawn on the philosophy of the natural sciences to consider the question of whether the Christian idea of the Trinity is to be understood *epistemically* as a useful framework that holds together the complex biblical witness to God, or *ontologically* as a statement about the nature of God. While this article has distinguished two broad approaches to the Trinity, each with its own distinct epistemic virtues, emphases, functions and potential theological applications, it declines to separate them, or treat them as incompatible. One approach focuses on the multiplicity of signs, acts and testimonies to the known activity and presence of God; the other on the unity of the mystery of the triune God that lies behind and beyond them. Each can be maintained in parallel, and deployed for its own specific tasks – dogmatic, apologetic, homiletic or doxological.⁹¹ While there is much more that needs to be explored, it is hoped that this exploration of these two approaches to the Trinity may serve as a constructive and productive basis for further reflection and discussion.

⁸⁹ Johannes Hund and Hans-Otto Schneider, eds., *Bekenntnisschriften der evangelisch-lutherischen Kirche*, 6th edn (Gütersloh: Gütersloher Verlagshaus, 2013), p. 660 (my translation).

⁹⁰ See Catherine Mowry LaCugna, 'Making the Most of Trinity Sunday', in Maxwell E. Johnson, ed., *Memory and Hope: Readings on the Liturgical Year* (Collegeville, MN: Liturgical Press, 2000), pp. 247–61.

⁹¹ See, for example, Philip W. Butin, 'Preaching as a Trinitarian Event', in Daniel J. Treier and David Lauber, eds., *Trinitarian Theology for the Church: Scripture, Community, Worship* (Downers Grove: IVP Academic, 2009), pp. 204–24; Maxwell E. Johnson, *Praying and Believing in Early Christianity: The Interplay between Christian Worship and Doctrine* (Collegeville, MN: Liturgical Press, 2013); and Michael Downey, 'Trinity: Community, Communion, Contemplation', *American Benedictine Review* 64 (2013), pp. 138–53. A similar parallel might be noted between Aquinas's use of 'positive' and 'negative' theology as means of rendering the complexity of God. See Gregory Rocca, *Speaking the Incomprehensible God: Thomas Aquinas on the Interplay of Positive and Negative Theology* (Washington, DC: Catholic University of America Press, 2004).