

Natural Theology: A Deeper Structure to the Natural World

“It is not too much to say that the Gospel itself can never be fully known till nature as well as man is fully known.”¹ In his 1871 Hulsean Lectures at Cambridge University, F. J. A. Hort (1828–92) set out a manifesto for the theological exploration and clarification of the natural world. These words are a fitting introduction to the themes of this work. How can God be known through a deepening knowledge of nature itself, as well as of human nature? The delivery of Hort’s lectures coincided with the publication of Charles Darwin’s *Descent of Man*,² thus raising the question of how the debates about both the natural world and human nature resulting from Charles Darwin’s theory of descent with modification through natural selection affect our knowledge of God.

So are the structures and symbols of the observed world self-contained and self-referential? Or might they hint at a deeper structure or level of meaning to the world, transcending what can be known through experience or observation? Christianity regards nature as a limiting horizon to the unaided human gaze, which nevertheless possesses a created capacity, when rightly interpreted, to point beyond itself to the divine. The philosopher and novelist Iris Murdoch (1919–99) used the term “imagination” to refer to a capacity to see beyond the empirical to discern deeper truths about the world. This, she argued, is to be contrasted with “strict” or “scientific” thinking, which focuses on what is merely observed. An imaginative engagement with the world builds on the surface reading of things, taking the form of “a type of reflection on people, events, etc., which builds detail, adds colour, conjures up possibilities in ways which go beyond what could be said to be strictly factual.”³

Murdoch’s point here is that the imagination supplements what reason observes, thus further disclosing – without distorting – a richer vision of reality. If we limit ourselves to a narrowly empirical account of nature,

Darwinism and the Divine: Evolutionary Thought and Natural Theology, First Edition.

Alister E. McGrath.

© 2011 Alister E. McGrath. Published 2011 by Blackwell Publishing Ltd.

we fail to appreciate its full meaning, value, or agency.⁴ The Christian faith is also able to offer an approach to nature that is grounded in its empirical reality, yet possesses the ability to discern beyond the horizons of the observable. It provides a lens through which questions of deeper meaning may be explored and brought into sharp focus.

Although some limit the meaning of the term “natural theology” to an attempt to prove the existence of God on the basis of purely natural arguments, this is only one of its many possible forms.⁵ The field of “natural theology” is now generally understood to designate the idea that there exists some link between the world we observe and another transcendent realm. The idea possesses a powerful imaginative appeal, inviting us to conceive – and, in some of its construals, to anticipate inhabiting – a world that is more beautiful than that which we know, lacking its pain and ugliness.

Yet the appeal of the notion is not purely emotional or aesthetic; it has the potential to offer a framework for intellectual and moral reflection on the present order of things. A Christian natural theology is fundamentally hospitable toward a deeper engagement with reality. It provides an intellectual scaffolding that enables us to understand our capacity to engage with the world, and reaffirms its objectivity.⁶ For example, the mathematical awareness implanted within us enables us to discern and represent the rational patterns of the universe we inhabit, just as the moral awareness implanted within us allows us to orientate ourselves toward the good that lies at its heart. A robust Christian natural theology allows believers to pitch their tents “on the boundary between the manifest and the ineffable.”⁷ It is a cumulative enterprise,⁸ weaving together observation and reflection on the deep structures of the universe and the particularities of human experience.

One of the most familiar statements of this approach is found in the Hebrew Psalter, where the observation of the wonders of nature is explicitly connected with a deeper knowledge of the covenant God of Israel as the ultimate transcendent reality:⁹

The heavens are telling the glory of God;
and the firmament proclaims his handiwork (Psalm 19:1).

The basic affirmation here is that the glory of the God whom Israel already knew through the Law was further displayed within the realm of nature. The specific God who is already known to Israel through self-disclosure is thus known at a deeper level through the natural world. This passage does not suggest that nature proves or implies the existence of God; rather, it affirms that nature attests, declares, and makes manifest this known God.

A similar line of thought, without any necessary presumption of theistic entailment, is found in Plato’s theory of Forms, perhaps the most familiar philosophical account of this notion. Plato’s theory can be argued to arise

from philosophical reflection on the imperfection of the sensible world.¹⁰ Experience discloses imperfect exemplifications of beauty, in a world of shadows. Plato holds that there exists a world of Forms, in which true beauty exists, contrasting with its shadowy and imperfect manifestations in the world of human experience. There is a connection between these two worlds, even if Plato is generally thought to have failed to construct a secure bridge by which one might be entered from the other.¹¹

So what reasons might be given for believing in the existence of such a transcendent realm, when it is not capable of being observed directly? For many writers of the classical age, the answer lay in the deep structure and apparent design of the natural world. Such writers regularly proposed that the observation of the world pointed to a divine creator.¹² The Jewish wisdom tradition, for example, affirms a reverence and fascination for the natural world, while pointing out that this admiration should be transferred from the created order to the one who created it:¹³

For all people who were ignorant of God were foolish by nature; and they were unable from the good things that are seen to know the one who exists, nor did they recognize the artisan while paying heed to his works; but they supposed that either fire or wind or swift air, or the circle of the stars, or turbulent water, or the luminaries of heaven were the gods that rule the world. If through delight in the beauty of these things people assumed them to be gods, let them know how much better than these is their Lord, for the author of beauty created them. And if people were amazed at their power and working, let them perceive from them how much more powerful is the one who formed them. For from the greatness and beauty of created things comes a corresponding perception of their creator (Wisdom 13:1–5).

The fundamental argument here is that the arc of reasoning that should lead from nature to God has been disconnected and misdirected, leading to the attribution of divinity to the created order, rather than its wise artificer.¹⁴ This line of reasoning did not involve an appeal to the naturally inexplicable, or to effects whose origins were declared to lie outside the course of nature. Rather, the appeal is made to nature itself and its ordinary operations – operations whose “power and working” were seen as reflecting and embodying the power and wisdom of God.

Natural Theology in the Classical Tradition

Such themes find wide acceptance throughout the Mediterranean world of the classical era. In his *De natura deorum*, Marcus Tullius Cicero (106–45 BC) argued that it was virtually impossible to believe that the order of the world and the heavens came about by chance. Cicero argued that nature’s providential

care for both animals and human beings, the complex design of the human and animal bodies, and the intricate interdependency of all parts of nature pointed to the existence of some artificer or designer.¹⁵ Cicero himself suggested that analogies might be drawn with certain mechanisms – such as water-clocks or sundials – to point toward the conclusion of apparent design entailing the existence of a designer.¹⁶

A similar approach was developed by Dio Chrysostom (c. 40–c. 120) in his *Olympic Oration*, delivered at the Olympic Games probably around the year 107.¹⁷ Chrysostom here asserts that humanity developed its idea of divinity through reflection on the wonders of the natural world. Awe-inspiring or wonder-evoking sights in the heavens (such as the sun, moon, and stars) and on earth (such as the winds and woods, rivers and forests) pointed to the existence of the divine powers who brought them into being, and who could be known through them.¹⁸ Chrysostom saw the power of natural forces, as much as the beauty and ordering of nature, as indicators of their divine origination and signification.

Yet other classical writers were more cautious, noting the ambiguity of the natural world. Although Virgil's *Georgics* (written in 29 BC) exult in the beauty of the natural world, finding great pleasure in its richness and diversity, his nascent natural theology confronts without mastering the darker side of nature – such as the constant threat of attack by wild animals, or fear of the untamable forces of nature that could destroy life and render agriculture impossible.¹⁹

Given this aesthetic and moral ambivalence of nature in general, it is perhaps not surprising that others chose to focus on more promising aspects of the natural world – such as the intricacies of the human body. The imperial physician Galen of Pergamum (129–c. 200) saw the construction of human muscles as offering strong evidence of design, and devised a teleological account of the created order on the basis of his physiological insights. Galen's physiological and anatomical works are often dominated by the idea that every single part of the human body had been purposively designed as the best possible instrument for carrying out the functions of human existence. There is thus a strongly teleological aspect to Galen's account of the complexity of human anatomy, as set out in his *De usu partium*.²⁰ At times, Galen attributes this agency of design to nature itself; at others, to a Demiurge.²¹ Christian apologists were quick to use substantially the same argument, but attributing such teleological dimensions of the human body to God, perhaps most notably in the case of Lactantius's *De opificio Dei* (written around 303).²²

Early Christian writers lent support, implicit and explicit, to such lines of reasoning. The first letter of Clement, widely believed to date from around 97, reaffirms that God's wisdom and power are to be seen in the regular workings of the universe.²³

The heavens orbit in quiet submission to [God]. Day and night run the course God has ordained for them, without interfering with the other. Sun, moon, and the dancing stars orbit in harmony at God's command, none swerving from its appointed course. Season by season, the earth bears fruit in fulfilment of God's provision for the needs of people, beasts, and all living things upon its surface.

An appeal to the harmony of nature was an important element of Celtic Christianity, which recognized the creative hand of God manifested in both the harmony and power of the natural world.²⁴ The hymn often known as the "Deer's Cry" or the "Lorica," traditionally ascribed to Patrick, patron saint of Ireland, offers an excellent example of such a vision of nature.²⁵

I arise today, through the strength of Heaven:
light of Sun, brilliance of Moon, splendour of Fire,
speed of Lightning, swiftness of Wind, depth of Sea,
stability of Earth, firmness of Rock.

The relation between our everyday world and a proposed transcendent realm is traditionally discussed using the category of "natural theology." The origins of this phrase are pre-Christian, and can be located in the writings of Marcus Terentius Varro (116–27 BC).²⁶ Varro set out a threefold taxonomy of approaches to theology: "mythical theology (*theologia fabulosa*)," "civil theology (*theologia civilis*)," and "natural theology (*theologia naturalis*)."²⁷ Varro's preference clearly lay with "natural theology," understood as a rational attempt to discern God within the natural world by philosophers.

This approach had a significant impact on the manner in which Augustine of Hippo (354–430) chose to develop his own notion of natural theology.²⁸ We see this hinted at in a famous statement in his *Confessions*: "Then I really saw your invisible things, which are understood through those which are created. Yet I was not able to keep my gaze fixed."²⁹ The fundamental theme, once more, is that human reflection itself, including human reflection on the natural order, is capable of disclosing at least something concerning the realm of the divine. The origins of the notion of "natural theology" lie outside the Christian tradition. Nevertheless, Christian theologians found this to be a helpful notion, not least in that it facilitated apologetic engagement with late classical culture.³⁰ A secular notion was thus baptized and found its way into the service of Christian apologetics.

The Conceptual Fluidity of Natural Theology

The concept of natural theology became well established within Christian theology by the early modern period. Natural theology is a conceptually fluid notion, and always has been resistant to precise theological definitions,

even though the term is now generally used in a rather prescriptive manner in the philosophy of religion to denote “the enterprise of providing support for religious beliefs by starting from premises that neither are nor presuppose any religious beliefs.”³¹ Four broad approaches to natural theology can be identified in recent theological works, all with significant historical pedigrees.³²

- 1 A movement of the human mind toward God, grounded in humanity’s being made with an innate capacity or longing for God. The classic “argument from desire,” as found in the writings of C. S. Lewis and others,³³ can be placed in this category. This view holds that humanity is a “being with an intellectual destiny orientated God-ward,”³⁴ and thus rests on a particular view of human nature and destiny.
- 2 An argument from essentially “naturalistic premises” to religious beliefs. This might refer to theological beliefs drawn from the interpretation of nature, or to a theology based on deduction from *a priori* principles, rather than based upon divine revelation. An example of this would be the cosmological argument, as traditionally stated, which makes no religious assumptions in drawing its conclusions. This is probably the best-known form of natural theology, which has unfortunately led some to conclude that it is its only and defining form.
- 3 A “theology of nature,” which offers an interpretation of nature that is conducive to, or consistent with, religious belief. Here, a set of beliefs derived from revelation or the Christian tradition is used as a framework for developing a particular way of interpreting the natural world.³⁵ This is not understood as an argument from nature to God, but rather as an “attempt to show that the theological categories of thought are adequate to the interpretation of nature and the natural sciences.”³⁶ Natural theology thus affirms the resonance or consonance of the Christian faith and the natural world, without claiming that this observed resonance *proves* the truth of the Christian faith.
- 4 The exploration of perceived correspondences between “natural and evangelical experience.” The existence of an “analogy between the realm of grace and the realm of nature” – that is, between religious and physical experience – leads us to trace them back to the same ultimate source.³⁷

Some accounts of the development of natural theology have prematurely and improperly made adjudications concerning which of its forms is to be regarded as normative. The history of natural theology makes it clear that the term designates a variety of approaches, whose appeal is determined partly by cultural considerations, and partly by theological and philosophical pre-commitments. Every style of “natural theology” is embedded in a social matrix, consisting of a series of assumptions, often better intuited rather than demonstrated, which gives such a natural theology its distinctive plausibility.³⁸ As John

Hedley Brooke and other historians have stressed,³⁹ there is no single master narrative of natural theology within the Christian tradition. Rather, what we observe is a complex, shifting set of approaches, adapted to the envisaged contexts and audiences for any specific natural theology.

There are good reasons for proposing a direct link between natural theology and the natural sciences in the late Renaissance,⁴⁰ including the imaginatively powerful notion of the scientist as a priest in God's temple of nature.⁴¹ A fascination with the wonder of nature is an integral element of European culture throughout the Renaissance and early modern periods.⁴² The beauty, complexity, and order of nature were the subject of both admiration and speculation for many medieval and Renaissance writers, not least on account of the widespread assumption that the natural world was somehow emblematic of its creator. Bonaventura of Bagnoregio (1221–74) was representative of a much wider tradition, which held that the wonders of nature should be seen as “shadows, echoes and pictures” of God its creator, and that these “are set before us in order that we might know God.”⁴³

Yet these intuitions of divinity were explored and expressed in a diversity of manners. Far from being codified in some formal system of “natural theology,” they represent different modes of engagement with, and levels of representation of, the perceived religious significance of nature. Some are clearly cognitive in style; others are more imaginative, appealing to the beauty of nature. Some exult in the beauty of nature as observed; others argue for the need for a deeper level of engagement, if nature's deeper structures and beauty are to be fully appreciated. Natural theology became an increasingly significant motivation for natural science in the early modern period.

The rise of natural theology in the early modern period was not without its debates and difficulties. The culturally dominant interpretation of the intrinsically polyvalent term “natural theology” began to shift. Where once natural theology was generally understood to affirm the consonance of reason and the experience of the natural world with the Christian tradition, it increasingly came to designate the attempt to demonstrate the existence of God by an appeal to reason or to the domain of nature.⁴⁴ Although initially this development was seen as strongly supportive of faith in the late seventeenth and early eighteenth centuries, anxieties began to emerge,⁴⁵ leading many to question whether the enterprise of natural theology was apologetically useful, or theologically defensible.

The main difficulty was that this form of natural theology seemed to point toward an impoverished conception of God, which was not worthy of the Christian tradition. Nature revealed a divine watchmaker – a divine mechanic, who seemed to fall far short of the Christian notion of a transcendent, glorious personal God.⁴⁶ Furthermore, natural theology often seemed to result in a form of Christian belief which was not merely religiously inadequate, but potentially heretical.⁴⁷ Even those who pursued the route of natural

theology in the eighteenth century were aware that it could incline the mind to atheism as much as to religious belief.⁴⁸

More recently, the entire enterprise of natural theology has fallen under a cloud of suspicion within many sections of Protestant theology.⁴⁹ A distinct sense of nervousness attends any discussion of the theme;⁵⁰ to speak of “natural theology” is to tread on confessional eggshells. The theological ascendancy of Karl Barth (1886–1968) has led to natural theology being seen as subversive of divine revelation, and erosive of theological distinctiveness.⁵¹ For Barth, natural theology undermines the necessity, uniqueness, and distinct character of God’s self-revelation. If knowledge of God can be achieved independently of God’s self-revelation in Christ, then it follows that in principle humanity can dictate the place, time, and means of its knowledge of God. Natural theology, for Barth, represents an attempt on the part of humanity to understand itself apart from and in isolation from revelation, amounting to a deliberate refusal to accept the necessity and consequences of revelation.

A response may certainly be made to these concerns, most notably by proposing that natural theology abandon its pretensions to epistemological independence and move away from any attempt to conceive itself as offering proofs of God’s existence, independent of divine revelation.⁵² There is no reason why natural theology should not be reconceived as the affirmation of the consonance or resonance of reason and the experience of the natural world with the Christian tradition. Yet the Barthian critique remains a concern for many, and it needs to be addressed.⁵³

Yet despite these and other concerns, natural theology appears to be enjoying a renaissance in the early twenty-first century. Why?

The Eternal Return of Natural Theology

Natural theology has a persistent habit of returning, even when its death notice has been extensively and repeatedly published.⁵⁴ The question of the imaginative potential of nature to point beyond itself remains alive, continuing to possess the power to captivate the human mind and imagination,⁵⁵ appealing to our yearning for truth, beauty, and goodness.⁵⁶ For William James, natural theology is a means of appeasing the “craving of the heart” to believe that there is something of ultimate significance beyond the empirical world of nature.⁵⁷ As the philosopher John Cottingham points out, a Christian natural theology⁵⁸

... provides a framework that frees us from the threats of contingency and futility that lurk beneath the surface of supposedly self-sufficient and autonomous secular ethics. It offers us not a proof, but a hope that the “cave” of our human world (to use Plato’s image) is not utterly sealed and closed, but that our flickering moral intimations reflect the ultimate source of all goodness.

When properly grounded on a robust and intellectually fertile Trinitarian foundation, natural theology offers ontological stability to what might otherwise be little more than happenstance intuitions, longings, and aspirations.

Among the cultural shifts that are creating, or have the potential to generate, a new interest in natural theology, we may note the following.

- 1 There is growing interest in natural theology emerging within the natural sciences. Many natural scientists are coming to the conclusion that their disciplines raise fundamentally theological and metaphysical questions, the pursuit of which constitutes a legitimate extension of the scientific method.⁵⁹ There is growing sympathy for the view that natural theology can provide a deeper understanding on fundamental issues such as the fine-tuning of the universe, where the natural sciences can raise questions that point beyond its intellectual horizons, and transcend its power to answer.⁶⁰ In my 2009 Gifford Lectures at the University of Aberdeen,⁶¹ I explored how a Christian natural theology appears to be able to accommodate “anthropic” phenomena in an intellectually satisfying manner, noting how contemporary scientific thinking about cosmic origins and development resonates with a Trinitarian theological vision. This is not understood to prove the Christian faith; merely to indicate its capacity for observational accommodation, which might reasonably be taken as an indication – but certainly not a *demonstration* – of its truth.
- 2 Despite the secularization of western culture, empirical research shows that there remains a significant level of public interest in the notion of the transcendent.⁶² Even though western culture is often asserted to be secular, there is widespread evidence of continuing interest in transcendent experiences, in which people form the impression that there is “something there”; or that they were in contact with – to use Rudolf Otto’s luminous phrase – “the wholly other”;⁶³ with something boundless, limitless, and profoundly different, which was resistant to precise definition; which was not necessarily associated with any religious institutions or authorities; which they could not fully grasp; and which utterly surpassed the human capacity for verbal expression. This sense of a heightened awareness of the transcendent is often linked with a transformative encounter with nature, both in the past (as in the writings of the Romantic movement) and in the present.⁶⁴
- 3 Recent years have seen the resurgence of various forms of paganism, which often emphasize the spiritual importance of nature. Neopaganism began to emerge in Germany during the period of the Weimar Republic (1919–33), and is often cited as a growing influence on contemporary German culture.⁶⁵ The new forms of paganism are not monolithic, and represent a wide range of beliefs and practices, some of which represent appropriations of pre-Christian ideas (such as Druidism), others of

which are better understood as postmodern constructions reflecting a growing cultural interest in nature and spirituality.⁶⁶ Yet underlying most, if not all, of these new forms of paganism is a strong sense of nature as a sacred entity, capable of disclosing its secret wisdom to those who are able to discern its deeper levels of meaning.

Such considerations, to which others might easily be added, point to the need to renew a vision for natural theology within the academy and church, not least as the basis for a sustained intellectual engagement with contemporary culture. The recognition of the importance of such an undertaking is not, of course, new. In 1934, for example, Emil Brunner famously declared the need for his generation to rediscover a proper understanding of natural theology, able to engage with the concerns of the age. “It is the task of our theological generation to find its way back to a proper natural theology.”⁶⁷

Brunner’s attempt to reconstruct such a natural theology did not find wide support at the time, nor subsequently. Yet while Brunner’s specific approach to natural theology might be problematic, I believe that he was completely correct in identifying the importance of natural theology in his own cultural situation, and that its importance has, if anything, increased since then. Brunner bequeathed to his successors a task, rather than its solution. We still need to find our way back to a workable natural theology that is rooted in Scripture, as well as defensible theologically and usable apologetically.

However, any meaningful attempt to develop a viable “natural theology” must now face the challenges raised by Charles Darwin and his legacy. It is often suggested that the publication of Darwin’s *Origin of Species* (1859) marked the end of any defensible natural theology, causing the curtain to fall on this once-great enterprise of Christian theology. Yet is this actually the case? Was this the judgment of Christian theologians at the time of Darwin? Or need it be the judgment of Christian theologians today? Given these questions, it seemed entirely appropriate to consider the complex yet fascinating legacy of Charles Darwin for natural theology in my 2009 Hulsean Lectures at Cambridge University, marking both the 200th anniversary of his birth, and the 150th anniversary of the publication of his landmark work.

The impact of Darwin’s theory of descent with modification through natural selection was shaped by its intellectual context in Victorian England, within which certain approaches to natural theology had become dominant at the level of the popular imagination. As events made clear, this specific form of natural theology proved to be especially vulnerable at critical points. At least to some minds, the erosion of the intrinsic plausibility of certain specific approaches to natural theology, whether through internal incoherence or a failure to engage adequately with the external world, discredited the enterprise of natural theology in general.

Yet we have already made frequent reference to the importance of Darwinism, without offering any clarification of what this term might mean. In the following chapter, we shall explore the many facets of this complex notion.

Notes

- 1 Hort, F. J. A., *The Way, The Truth, The Life: The Hulsean Lectures for 1871*. 2nd edn. London: Macmillan, 1894, 83.
- 2 Hort's Hulsean Lectures, though delivered in 1871, were not written up for publication until twenty years later. His personal journals record much anxiety about the quality and delivery of the lectures: Hort, Fenton John Anthony, and Arthur Hort, *Life and Letters of Fenton John Anthony Hort*. 2 vols. London: Macmillan, 1896, vol. 2, 52–4; 148; 161. In some letters written in 1860, Hort commented that he regarded Darwin's theory, as set out in the *Origin of Species*, as "unanswerable": Hort, *Life and Letters*, vol. 1, 414; 416.
- 3 Murdoch, Iris, "The Darkness of Practical Reason." In *Existentialists and Mystics*, ed. Peter Conradi, 193–202. London: Chatto, 1998, 198.
- 4 See the discussion in Smith, Barbara Herrnstein, *Natural Reflections: Human Cognition at the Nexus of Science and Religion*. New Haven, CT: Yale University Press, 2009. Smith argues that a new "natural theology" emerges through the naturalizing of religion on the one hand, and the theologizing of natural science on the other.
- 5 Fergusson, David, "Types of Natural Theology." In *The Evolution of Rationality: Interdisciplinary Essays in Honor of J. Wentzel Van Huyssteen*, ed. F. Le Ron Shults, 380–93. Grand Rapids, MI: Eerdmans, 2006.
- 6 For what follows, see Cottingham, John, *Why Believe?* London: Continuum, 2009, 44–7.
- 7 Cottingham, *Why Believe?*, 47.
- 8 It is important to note that reflections on "design" are only one strand in such a cumulative approach: see the important points made by Geivett, R. Douglas, "David Hume and a Cumulative Case Argument." In *In Defense of Natural Theology: A Post-Humean Assessment*, ed. James F. Sennett and Douglas Groothuis, 297–329. Downers Grove, IL: InterVarsity Press, 2005.
- 9 On the dating and leading themes of this Psalm, see Vos, Cas J. A., *Theopoetry of the Psalms*. Pretoria: Protea Book House, 2005, 92–116. See further Collins, John J., "The Biblical Precedent for Natural Theology." *Journal of the American Academy of Religion* 45 (1977): B35–B67; Barr, James, *Biblical Faith and Natural Theology*. Oxford: Clarendon Press, 1993, 81–101.
- 10 Fine, Gail, *On Ideas. Aristotle's Criticism of Plato's Theory of Forms*. Oxford: Clarendon Press, 1993, 97–100.
- 11 Devereux, Daniel T., "Separation and Immanence in Plato's Theory of Forms." *Oxford Studies in Ancient Philosophy* 12 (1994): 63–90. For the resolution of this problem in Middle Platonism, see Cox, Ronald R., *By the Same Word*:

- Creation and Salvation in Hellenistic Judaism and Early Christianity*. Berlin: De Gruyter, 2007, 28–55.
- 12 As noted by Vidal, Fernando, and Bernard Kleeberg, “Knowledge, Belief, and the Impulse to Natural Theology.” *Science in Context* 20 (2007): 381–400.
 - 13 For the importance of this tradition in relation to the quest for God within and through nature, see Lefebure, Leo D., “The Wisdom Tradition in Recent Christian Theology.” *Journal of Religion* 76 (1996): 338–48; Burkes, Shannon, “Wisdom and Apocalypticism in the Wisdom of Solomon.” *Harvard Theological Review* 95 (2002): 21–44; Fiddes, Paul S., “‘Where Shall Wisdom Be Found?’ Job 28 as a Riddle for Ancient and Modern Readers.” In *After the Exile: Essays in Honor of Rex Mason*, ed. John Barton and David Reimer, 171–90. Macon, GA: Mercer University Press, 1996; Dell, Katharine J., *The Book of Proverbs in Social and Theological Context*. Cambridge: Cambridge University Press, 2006, 125–54.
 - 14 For a similar argument in Paul’s letters, especially the opening chapters of Romans, see Dunn, James D. G., *The Theology of Paul the Apostle*. Grand Rapids, MI: Eerdmans, 2006, 38–49.
 - 15 Cicero, *De natura deorum*, II.34. “An, cum machinatione quadam moveri aliquid vedemus, ut sphaeram ut horas ut alia permulta, non dubitamus quin illa opera sint rationis.”
 - 16 Gerson, Lloyd P., *God and Greek Philosophy: Studies in the Early History of Natural Theology*. London: Routledge, 1994, 155–60.
 - 17 Klauck, Hans-Josef, “Nature, Art, and Thought: Dio Chrysostom and the *Theologia Tripertita*.” *Journal of Religion* 87 (2007): 333–54, especially 341–50.
 - 18 Betz, Hans Dieter, “God Concept and Cultic Image: The Argument in Dio Chrysostom’s Oratio 12 (Olympikos).” *Illinois Classical Studies* 29 (2004): 131–42.
 - 19 Boyancé, Pierre, “La Religion des ‘Géorgiques’ à la lumière des travaux récents.” *Aufstieg und Niedergang der Römischen Welt* II.31.1 (1980): 549–73.
 - 20 Cosans, Christopher E., “The Experimental Foundations of Galen’s Teleology.” *Studies in History and Philosophy of Science* 29 (1998): 63–80.
 - 21 For the form of natural theology this approach envisaged, see Lindberg, David C., *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to AD 1450*. 2nd edn. Chicago: University of Chicago Press, 2007, 129–31.
 - 22 Lactantius, *De opificio Dei*, 2–13. Lactantius here seems to make indirect use of Galen.
 - 23 1 Clement 20:1–4.
 - 24 Newell, J. Philip, *The Book of Creation: An Introduction to Celtic Spirituality*. New York: Paulist Press, 1999, 51–64.
 - 25 Stokes, Whitley, and John Strachan, *Thesaurus Palaeohibernicus: A Collection of Old-Irish Glosses, Scholia, Prose, and Verse*. 2 vols. Cambridge: Cambridge University Press, 1901, vol. 2, 354–8. The hymn is generally dated to the seventh century, although it reflects older ideas.
 - 26 See Lehmann, Yves, *Varron théologien et philosophe romain*. Brussels: Latomus, 1997, 193–225.

- 27 Or “tripartita.” See Lieberg, Godo, “Die ‘Theologia Tripartita’ in Forschung und Bezeugung.” *Aufstieg und Niedergang der römischen Welt* 4 (1973): 63–115; Lieberg, Godo, “Die Theologia Tripartita als Formprinzip antiken Denkens.” *Rheinisches Museum für Philologie* 125 (1982): 25–53.
- 28 Dihle, Albrecht, “Die Theologia Tripartita bei Augustin.” In *Geschichte – Tradition – Reflexion: Festschrift für Martin Hengel zum 70. Geburtstag*, ed. Hubert Cancik, 183–202. Tübingen: Mohr Siebeck, 1996.
- 29 Augustine of Hippo, *Confessions* VII.xvii.23. See also VII.xx.26 and X.vi.10. Note the implicit reference to Paul’s statements in Romans 1.
- 30 See the account in Pelikan, Jaroslav, *Christianity and Classical Culture: The Metamorphosis of Natural Theology in the Christian Encounter with Hellenism*. New Haven, CT: Yale University Press, 1993, 22–39.
- 31 Alston, William P., *Perceiving God: The Epistemology of Religious Experience*. Ithaca, NY: Cornell University Press, 1991, 289.
- 32 I here broadly follow the analysis of Casserley, J. V. Langmead, *Graceful Reason; The Contribution of Reason to Theology*. London: Longmans, Green, 1955, 1–8. Other frameworks of analysis could easily be developed: for example, see Fergusson, “Types of Natural Theology.” The fundamental point here is the historical diversity of approaches to natural theology.
- 33 See especially Kreeft, Peter, “C. S. Lewis’s Argument from Desire.” In *G. K. Chesterton and C. S. Lewis: The Riddle of Joy*, ed. Michael H. MacDonald and Andrew A. Tadie, 249–72. Grand Rapids, MI: Eerdmans, 1989.
- 34 Casserley, *Graceful Reason*, 2.
- 35 This is the kind of approach that I myself develop in a number of works, most notably McGrath, Alister E., *The Open Secret: A New Vision for Natural Theology*. Oxford: Blackwell, 2008, 1–20; McGrath, Alister E., *A Fine-Tuned Universe: The Quest for God in Science and Theology*. Louisville, KY: Westminster John Knox Press, 2009, 21–82. However, my own approach goes beyond this, holding that such a theology of nature leads naturally into the notion of a human quest for God, rather than seeing natural theology as a mode of reasoning distinct from a theology of nature.
- 36 Casserley, *Graceful Reason*, 3. This approach, framed in terms of the demonstration of the “consonance” between Christian theology and the scientific observation of the world, plays an important role in the thought of John Polkinghorne: see particularly Irlenborn, Bernd, “Konsonanz von Theologie und Naturwissenschaft? Fundamentaltheologische Bemerkungen zum interdisziplinären Ansatz von John Polkinghorne.” *Trierer Theologische Zeitung* 113 (2004): 98–117; Stenke, Johannes Maria, *John Polkinghorne: Konsonanz von Naturwissenschaft und Theologie*. Göttingen: Vandenhoeck & Ruprecht, 2006.
- 37 Casserley finds this view in the writings of Joseph Butler (1692–1752), especially his *Analogy of Religion, Natural and Revealed* (1736): see Casserley, *Graceful Reason*, 3–6. See further Rurak, James, “Butler’s Analogy: A Still Interesting Synthesis of Reason and Revelation.” *Anglican Theological Review* 62 (1980): 365–81.
- 38 The issue here is that of “plausibility structures,” a term introduced by sociologist Peter Berger to refer to a “structure of assumptions and practices which

- determine what beliefs are plausible and what are not." See Berger, Peter L., *A Far Glory: The Quest for Faith in an Age of Credulity*. New York: Free Press, 1992, 125–6.
- 39 See especially Brooke, John Hedley, "Natural Theology and the Plurality of Worlds: Observations on the Brewster–Whewell Debate." *Annals of Science* 34 (1977): 221–86; Brooke, John Hedley, "Science and the Fortunes of Natural Theology: Some Historical Perspectives." *Zygon* 24 (1989): 3–22; Brooke, John Hedley, and Geoffrey Cantor, *Reconstructing Nature: The Engagement of Science and Religion*. New York: Oxford University Press, 2000, 141–206.
- 40 Ogilvie, Brian W., "Natural History, Ethics, and Physico-Theology." In *Historia. Empiricism and Erudition in Early Modern Europe*, ed. Gianna Pomata and Nancy G. Siraisi, 75–103. Cambridge, MA: MIT Press, 2005.
- 41 Harrison, Peter, "'Priests of the Most High God, with Respect to the Book of Nature': The Vocational Identity of the Early Modern Naturalist." In *Reading God's World*, ed. Angus Menuge, 55–80. St Louis, MO: Concordia, 2004.
- 42 For the wider background, see Daston, Lorraine, and Katharine Park, *Wonders and the Order of Nature, 1150–1750*. Cambridge, MA: MIT Press, 1998.
- 43 Bonaventure, *Itinerarium Mentis in Deum*, 2.
- 44 Such rationalist approaches to natural theology can be found in the writings of Benedict Spinoza (1632–77), Gottfried Wilhelm Leibniz (1646–1716), and Christian Wolff (1679–1754): see Corr, Charles A., "The Existence of God, Natural Theology and Christian Wolff." *International Journal for Philosophy of Religion* 4 (1973): 105–18; Webb, Mark O., "Natural Theology and the Concept of Perfection in Descartes, Spinoza and Leibniz." *Religious Studies* 25 (1989): 459–75.
- 45 See the classic study of Odom, Herbert H., "The Estrangement of Celestial Mechanics and Religion." *Journal of the History of Ideas* 27 (1966): 533–58.
- 46 This point was made repeatedly by late Victorian writers, such as Aubrey Moore, alarmed at the deficient notion of God found in William Paley's natural theology: Moore, Aubrey, "The Christian Doctrine of God." In *Lux Mundi: A Series of Studies in the Religion of the Incarnation*, ed. Charles Gore, 57–109. London: John Murray, 1890.
- 47 See Brooke, John Hedley, and Ian Maclean, eds., *Heterodoxy in Early Modern Science and Religion*. Oxford: Oxford University Press, 2005.
- 48 Buckley, Michael J., *Denying and Disclosing God: The Ambiguous Progress of Modern Atheism*. New Haven, CT: Yale University Press, 2004, 38–43.
- 49 For the significant challenges to natural theology that arose within the Protestant tradition during the nineteenth and twentieth centuries, see Kock, Christoph, *Natürliche Theologie: Ein evangelischer Streitbegriff*. Neukirchen-Vluyn: Neukirchener, 2001, 295–412.
- 50 Jüngel, Eberhard, "Das Dilemma der natürlichen Theologie und die Wahrheit ihres Problems." In *Entsprechungen: Gott – Wahrheit – Mensch*, 158–77. Tübingen: Mohr Siebeck, 2002, 158–9.

- 51 Szekeres, Attila, "Karl Barth und die natürliche Theologie." *Evangelische Theologie* 24 (1964): 229–42; Kapper, Michael, "'Natürliche Theologie' als innerprotestantisches und ökumenisches Problem? Die Kontroverse zwischen Eberhard Jüngel und Wolfhart Pannenberg und ihr ökumenischer Ertrag." *Catholica* 49 (1995): 276–309.
- 52 An approach defended by a number of writers, including myself: see McGrath, *The Open Secret*, 171–216.
- 53 Anderson, Ray S., "Barth and a New Direction for Natural Theology." In *Theology Beyond Christendom: Essays on the Centenary of the Birth of Karl Barth*, ed. John Thompson, 241–66. Allison Park, PA: Pickwick, 1986.
- 54 A point often made about the related field of natural law: see Rommen, Heinrich, *Die ewige Wiederkehr des Naturrechts*. Leipzig: Hegner, 1936.
- 55 McGrath, Alister E., "'Schläft ein Lied in allen Dingen'? Gedanken über die Zukunft der natürlichen Theologie." *Theologische Zeitschrift* 65 (2009): 246–60.
- 56 Most notably, see McGrath, *The Open Secret*, 221–313.
- 57 James, William, "Is Life Worth Living?" In *The Will to Believe and Other Essays in Popular Philosophy*, 32–62. New York: Longmans, Green, 1897, 40. For a critique of James's views on natural theology, see Hauerwas, Stanley, *With the Grain of the Universe: The Church's Witness and Natural Theology*. London: SCM Press, 2002, 43–86.
- 58 Cottingham, *Why Believe?*, 47.
- 59 See, for example, Barrow, John, and Frank J. Tipler, *The Anthropic Cosmological Principle*. Oxford: Oxford University Press, 1986; Gingerich, Owen, "Is There a Role for Natural Theology Today?" In *Science and Theology: Questions at the Interface*, ed. M. Rae, H. Regan, and J. Stenhouse, 29–48. Edinburgh: T. & T. Clark, 1994; Conway Morris, Simon, *Life's Solution: Inevitable Humans in a Lonely Universe*. Cambridge: Cambridge University Press, 2003.
- 60 Polkinghorne, John, "Where Is Natural Theology Today?" *Science and Christian Belief* 18 (2006): 169–79.
- 61 McGrath, *Fine-Tuned Universe*, 111–202.
- 62 Hay, David, *Something There: The Biology of the Human Spirit*. London: Darton, Longman & Todd, 2006; McGrath, *The Open Secret*, 23–40.
- 63 Otto, Rudolf, *Das Heilige, über das Irrationale in der Idee des Göttlichen und sein Verhältnis zum Rationalen*. 17th edn. Munich: C. H. Beck, 1931, 13–74.
- 64 Weiskel, Thomas, *The Romantic Sublime: Studies in the Structure and Psychology of Transcendence*. Baltimore, MD: Johns Hopkins University Press, 1986; Faulconer, James E., ed., *Transcendence in Philosophy and Religion*. Bloomington, IN: Indiana University Press, 2003; Richards, Robert J., *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*. Chicago: University of Chicago Press, 2002.
- 65 For example, see Faber, Richard, and Renate Schlesier, eds., *Die Restauration der Götter: Antike Religion und Neo-Paganismus*. Würzburg: Königshausen & Neumann, 1986; Schnurbein, Stefanie von, *Göttertrost in Wendezeiten: Neugermanisches Heidentum zwischen New Age und Rechtsradikalismus*. Munich: Claudius Verlag, 1993; Figl, Johann, *Handbuch Religionswissenschaft*:

Religionen und ihre zentralen Themen. Innsbruck: Verlagsanstalt Tyrolia, 2003, 207–21.

- 66 Hutton, Ronald, *The Triumph of the Moon: A History of Modern Pagan Witchcraft*. Oxford: Oxford University Press, 2001, 398.
- 67 Brunner, Emil, “Natur und Gnade: Zum Gespräch mit Karl Barth.” In *Ein offenes Wort. Vorträge und Aufsätze 1917–1934*, ed. Rudolf Wehrli, 333–75. Zürich: Theologischer Verlag, 1981, 375. For reflections on this controversy, see Gestrich, Christof, *Neuzeitliches Denken und die Spaltung der dialektischen Theologie: Zur Frage der natürlichen Theologie*. Tübingen: Mohr, 1977, 158–69; 342–50.