CHAPTER 1

Explanation before Science and Religion

Religion and Explanation

What bearing should religious convictions have on how phenomena in nature are understood and explained?

The answer one receives to this question depends a great deal on whom one is asking. To those for whom the answer is ‘none whatsoever’, their reasons for keeping religion out of the mix often line up with one of two common ways in which religion is construed in relation to science. For holders of the first of these, known as the ‘non-overlapping magisteria’ view, religions simply are not explanatory entities. Responsibility for explaining phenomena in nature belongs to science, they say, while religion reigns over the domain of meaning. As palaeontologist Stephen Jay Gould puts it, ‘Science tries to document the factual character of the natural world, and to develop theories that coordinate and explain these facts. Religion, on the other hand, operates in the equally important, but utterly different, realm of human purposes, meanings, and values – subjects that the factual domain of science might illuminate, but can never resolve’. Science alone, for followers of Gould, is responsible for explaining what happens in nature, and so religion and science do not directly compete with each other.1

For adherents of the second view, religions are direct but deficient explanatory competitors to science.3 Martin Kettle’s Guardian column immediately following the horrific 2004 Indian Ocean earthquake and

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3 ‘As broad explanatory systems, religion and science each provide answers to a wide array of fundamental questions and concerns, and so each have strong explanatory value. However, these belief systems often provide different explanations for the same phenomena, and this competition for
4 Setting the Scene

tsunami exemplifies this competitive logic. Kettle asserts the existence of two possible answers to the question of why such a catastrophic event might have occurred: ‘As with previous earthquakes, any explanation of this latest one poses us a sharp intellectual choice. Either there is an entirely natural explanation for it, or there is something other kind’. The ‘natural’ one he has in mind is the one put forward by scientists – in this case, seismologists. The ‘other kind’ refers to explanations derived from a ‘non-scientific belief system’, and whose coherence Kettle sincerely doubts. Undergirding this competitive view is the idea that scientific and religious explanations are separable according to the causes to which they appeal. Science explains what happens in nature naturalistically – that is, by appealing to natural causality – while religious persons (so the argument goes) expect supernatural causes to be present and therefore propose explanations that appeal to supernatural agencies and causes.

Despite religion’s best efforts, holders of this second view say, the historical record clearly evidences science’s explanatory superiority. Triumphalist historical narratives, such as those purveyed by evolutionary biologist Jerry Coyne, purportedly demonstrate that in episode after episode science has uncovered the correct explanation for countless phenomena that had once been explained – erroneously – by religion:

Science nibbles at religion ... relentlessly consuming divine explanations and replacing them with material ones. Evolution took a huge bite a while back, and recent work on the brain has shown no evidence for souls, spirits, or any part of our personality or behavior distinct from the lump of jelly in our head. We now know that the universe did not require a creator. Science is even studying the origin of morality.


Explanation before Science and Religion

History thus reveals what religions really are: failed sciences.6 If the past is anything to go by, we can expect explanations infused with the supernatural to continue ‘retreating into the ever-shrinking gaps not yet filled by science’ until every one of them has been identified and eliminated.7 Religions should therefore steer well clear of explanation.8

For holders of either of these views, religious beliefs should have nothing to do with explanations of phenomena in nature, and naturalistic explanation is unimaginable as a constitutive part of a religious outlook or something that religious people might make use of. For those who see the world through religious eyes, however, neither of these approaches typically is acceptable. Many religious persons believe that their religious convictions are relevant to how they explain what happens in nature, and think that their explanations should take account of those convictions. At the same time, the historical record includes countless religious persons who have found their traditions to be hospitable (to a greater or lesser extent) to naturalistic forms of explanation.9 In their efforts to let the full range of their commitments bear on their understanding of nature, religious persons frequently defy the clean separation of religion and science.
that those wanting to keep religious elements out of the study of nature seek to maintain.

Providential Naturalism

Among those Christians who think that their religious commitments matter to how they understand and explain phenomena in nature, one doctrinal locus that has long been thought germane to the topic is the doctrine of providence. No single view of providence has prevailed within the Christian tradition, but throughout history Christians generally have understood it to mean that God creates, upholds, and provides for the entire created order. That provision is diverse: ‘Everywhere the Bible speaks of God as one who creates, preserves, upholds, wills, acts, governs, foresees, elects, calls, predestines, judges, redeems, forgives, reconciles, provides for, protects, heals, and loves’. As the early modern authors we look at in the following chapters attest, providence is especially relevant to explanations of occurrences in nature because it has a direct bearing on how Christians think about natural causality.

Excerpt

as James Clerk Maxwell, for example, believed that God providentially governs nature, but thought that God’s provision manifests not through both natural and miraculous occurrences but through natural occurrences alone. God, Maxwell thought, governs through natural laws that are completely uniform in operation. All phenomena in nature are thus generated by the temporal unfolding of natural causality, and explanations of phenomena need appeal only to natural causes.12

To holders of the second view, God’s providential oversight of nature means that nature possesses significant, but not total, orderliness and predictability.13 Created entities are brought into being and sustained in their operation at all times by God, and for some percentage of all phenomena in history nature’s causal activity is sufficiently regular that it is not necessary to invoke the action of the transcendent cause (i.e., the vertical plane) that holds them in being and energises their activity when explaining their causal interactions with each other on the horizontal plane.14 Natural causality cannot, however, account for the remaining phenomena, because those occurrences are miraculous. God’s providential guidance of the created order thus means that their explanations will at times be naturalistic, and at other times not. To assume that a naturalistic explanation can be


13 This kind of regularity is generally understood to be made possible by, and undergirded at every moment by, God. In other words, it is framed by the doctrine of creation, and is therefore not a form of deism. Among those for whom creation is the starting point like this, God’s action is a ‘reality to be acknowledged’, and is the ‘very foundation of whatever we can say about the world’. Lydia Jaeger, ‘Against Physicalism-plus-God: How Creation Accounts for Divine Action in Nature’s World’, Faith and Philosophy 29 (2012), 293–312, 304.

Setting the Scene

provided for every single phenomenon in nature is to misunderstand how God works in the world.

For holders of either the first or second views, the extent to which natural causality can explain occurrences in nature flows from the underlying picture of providence. For those who subscribe to the third view, providence is bracketed out and a fully naturalistic methodology is instead embraced. Among Christian professional scientists, for example, any personal convictions they may have about providence are set aside once they walk into the laboratory and follow science’s fully naturalistic methodology. Outside the lab they might understand providence to mean that certain occurrences are miraculous and thus beyond the explanatory scope of natural causality. Inside the lab, however, they follow the norms of the scientific community and submit to its explanatory constraints, one of which is that phenomena in nature are explicable through natural causality alone. By methodologically limiting their explanations to natural causes, their beliefs about God’s providential government of the created order and the possibility of supernatural causality in history are rendered immaterial.¹⁵

Exponents of the first and second views deploy holistic explanatory frameworks that emerge from how they understand providence. In both

Explanation before Science and Religion cases their view of nature reflects an integral approach that draws on the full range of their commitments. In this book we call these integrated providence and natural causality frameworks providential naturalisms, and refer to those who employ such frameworks to understand and explain phenomena as providential naturalists. From a causal perspective, providential naturalisms constitute a spectrum of possible positions. At one end are those (like Maxwell) who adopt the first, fully naturalistic view described above. They are committed to a providential outlook, but their understanding of providence leads them to think that 100 per cent of phenomena throughout history are generated by natural causality. We call those persons providential full naturalists, or full naturalists for short. For those who adopt the second view described above, the proportion of phenomena generated by natural causality is less than 100 per cent. We call them providential partial naturalists, or partial naturalists for short. Holders of the third view are already widely known as methodological naturalists.

These three views indicate that the relations between providence and natural causality among Christians have historically been quite varied. Behind all three, however, is the idea that one can be religious and at the same time study and explain phenomena in nature in ways that rely heavily on natural causality and naturalistic explanation. The first and second naturalism-within-religion approaches also challenge the idea that natural causality belongs solely to science, call into question any notion that religions are interested only (or even primarily) in supernatural causality, and suggest that segregating natural causality and theological convictions into science is a problematic enterprise.


17 As Matthew Stanley has argued, Maxwell’s religiously framed naturalism (or what we might here call his providential full naturalism) could easily be construed in non-religious ways, as it was by people like Thomas Henry Huxley, who wanted to rid science of its theistic elements and to make it a profession in which Christian clergy would not find a home. Nineteenth-century Christians such as Maxwell thus inadvertently laid the foundations for modern religion-free naturalistic science. Stanley, ‘Uniformity of Natural Laws in Victorian Britain’; Stanley, Huxley’s Church and Maxwell’s Demon.

18 This is not intended to exhaust all possible Christian views of God’s relationship to nature and corresponding approaches to explanation. Religious naturalists, for example, constitute yet another set of views about these issues. See, for example, Willem Drees, ‘Religious Naturalists and Science’, in Philip Clayton (ed.), The Oxford Handbook of Religion and Science (Oxford: Oxford University Press, 2008), 168–123. The three options listed here do nevertheless represent a common set of alternatives. Recent theological explorations of naturalism include Arthur R. Peacocke, All That Is: A Naturalistic Faith for the Twenty-First Century (Minneapolis: Fortress Press, 2007) and Sarah Lane Ritchie, Divine Action and the Human Mind (Cambridge: Cambridge University Press, 2019).
Setting the Scene

separate categories like ‘science’ and ‘religion’ is not the only way to carve up the explanatory territory.\(^9\)

Providential Naturalisms in Early Modern England

For those Christians who think that the doctrine of providence should bear on how they understand and explain occurrences in nature, what does providential naturalism look like in practice? This book answers that question by looking at a handful of figures from the past who fleshed out and implemented specific variants of providential naturalism in specific contexts. Their writings allow us to see what providential naturalisms have looked like in action. By identifying the presenting issues with which these figures dealt, the goals they had in mind when tackling those issues, and the categories and distinctions they developed and relied upon, we can get a feel for what it is like to be a providential naturalist. Equally importantly, their writings also point to the complexities and difficulties involved when God is brought to bear on the task of explanation. Even though their theological convictions about providence make room for natural causality and naturalistic forms of explanation, their writings expose some of the perennial difficulties facing Christians who want to bring their beliefs about God to the study of nature.

The authors we look at come from early modern England, and deploy that era’s Protestant theological language and conceptuality. Two features of post-Reformation England’s intellectual and religious landscape made providential naturalism a pre-eminent framework for understanding nature at the time, and therefore make it an ideal period to study. First, nature’s causal processes and mechanisms were receiving a great deal of attention because of the revolutions in natural philosophy then underway.\(^20\) As recent surveys of the (so-called) scientific revolution attest, sixteenth- and seventeenth-century Europe was a hotbed for new ideas about nature’s causal activity: novel approaches in anatomy were being conceived; new ideas about human physiology were being developed; bold arguments suggesting that the sun is stationary and the earth is orbiting around it were being advanced.

\(^9\) On the possibility of going back before the categories ‘science’ and ‘religion’, and of moving beyond them or pursuing opportunities after them, see Peter Harrison, John Milbank, and Paul Tyson (eds.), After Science and Religion: Fresh Perspectives from Philosophy and Theology (Cambridge: Cambridge University Press, 2022).

being put forth; mathematics and natural philosophy were being brought together in unprecedented ways; and mechanical and other philosophies of nature were being formulated and discussed. In England in particular, Francis Bacon was seeking to reform natural philosophy quite drastically, emphasising its utility for relieving the human condition. Later in the century a critical mass of eclectic scholars came together to form the Royal Society in London, an institution that nurtured the study of nature at the time, and which continues to do so to this day. Early modern England also featured natural philosophers of the stature of Robert Boyle and Isaac Newton, both of whom are pivotal figures in the history of science.

This widespread interest in natural causality occurred in a milieu, second, in which the influence of the Christian doctrine of providence was widespread. Especially among Protestants in early modern England, belief in God’s provision was taken to be an indispensable commitment of the faith. People from all walks of life saw God in the midst of everything, and tried to understand what was taking place in their own lives, and in


the world at large, in terms of God’s provision. Indeed, their near obsession with providence, says historian Alexandra Walsham, led people at the time to talk, preach, and write about the topic ‘in exhaustive detail and with wearisome frequency’. While intellectuals generally saw natural causality as having a vital role in God’s providential oversight of the created order, others often emphasised God’s supernatural activity in nature. For these ‘hotter sort’ of providentialists, God was believed to act within the created order with considerable frequency, and unusual occurrences were thought to convey messages to humanity directly from the deity.

Providence and natural causality may later have become estranged from one another, with the former associated primarily with the category of ‘religion’ and the latter with ‘science’. Among the early modern English intellectuals we look at in this book, however, providence and natural causality together in the form of providential naturalism constituted a complete picture of the world. This integrated picture was a common way of looking at nature at the time. Providential naturalism’s flexibility in accommodating different views about the proportion of phenomena produced by natural causality meant that providential naturalists of a more supernatural temperament could dial down the extent of naturalism as desired, whereas

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[24] According to Alexandra Walsham, providence ‘was not a marginal feature of the religious culture of early modern England, but part of the mainstream, a cluster of presuppositions which enjoyed near-universal acceptance. It was a set of ideological spectacles through which individuals of all social levels and from all positions on the confessional spectrum were apt to view their universe, an invisible prism which helped them to focus the refractory meanings of both petty and perplexing events’. Alexandra Walsham, Providence in Early Modern England (Oxford: Oxford University Press, 1999), 2–3.


[26] Ibid., 2. For Walsham this label refers to Puritans, whereas here it is being used in a narrower sense.

[27] The category ‘religion’ took on its modern meaning in the seventeenth century, while the category ‘science’ emerged only in the nineteenth century. See Harrison, Territories, for more on this history. For a historical narrative which (problematically) contrasts providence and naturalism to tell a story of a ‘programmatic shift from Christian Providentialism to more secular, scientific world views’, see Roy Porter, Enlightenment: Britain and the Creation of the Modern World (London: Penguin, 2000), 13, 229.