CHAPTER 7

Explanation after Science and Religion

We began this book with a question: what bearing should religious convictions have on how phenomena in nature are understood and explained? It was suggested in Chapter 1 that there are many people today who think that religious convictions should stay well clear of explanations of what happens in nature. In that context, the opening question is really one about the intellectual defensibility of what many Christians already in fact do, which is to try to make sense of what happens in nature in terms of their beliefs about God. For those Christians, by contrast, the opening question is instead really one about how their beliefs should be brought into play.

Investigating the reasonableness of Christian explanatory efforts would likely require a more philosophical approach than we have adopted here.[1] Such an approach might involve defining certain representative ideas about God, nature, and the relationship between the two, and examining the rationality of those ideas. In this book we have taken a more historical approach, focussing on past Christians who in fact brought their beliefs about God to bear on their explanations, and who did so in ways that share certain key features. Rather than needing to create our own abstracted set of ideas, their writings have made it possible to grasp how people in the past thought about God's relevance to understanding and explaining occurrences in nature. Their explanatory approach, one we have called *providential naturalism*, serves as a historical example of an explanatory framework that does not presume a clear separation between religion and science. Drawing attention to these figures introduces intellectuals who do not fit neatly into these categories as they are usually understood into ongoing conversations about the relations

[1] See Gregory W. Dawes, *Theism and Explanation* (New York: Routledge, 2009), for a good example of this kind of approach.

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between religious belief and naturalism,[2] and widens the circle of historical exemplars of Christian approaches to understanding and explaining phenomena in nature.

Sustained attention to these figures has revealed that constructing a providential naturalism explanatory framework is far from a straightforward exercise. As the previous chapters indicate, such frameworks rely on numerous assumptions, judgements, and ancillary commitments, and their development throws up many challenges and complexities along the way. Even though Christians may believe that God matters to the explanation of occurrences in nature, that does not mean that implementing an explanatory framework in which God has a direct bearing will not involve genuine difficulties.

In this concluding chapter, we summarise some of these thorny issues, ones that can be expected to arise whenever providential naturalists attempt to account for phenomena in nature. We focus here on three key areas in which God's involvement in nature shaped the early modern providential naturalist's explanatory efforts, and which can, therefore, be expected to shape the thinking of providential naturalists in other historical settings: the boundary between the natural and the miraculous; the communicative qualities of nature; and the form of life that one should adopt. After outlining some of the knotty challenges encountered in these areas, we end by considering their consequences for how Christian providential naturalists should hold their convictions, asking what attitude they should have towards their explanatory efforts.

The Commitments of Providential Naturalism

Before doing so, let us first summarise some of the key insights of the providential naturalisms we have looked at. Some version of these ideas will be present whenever providential naturalism is implemented.

[2] One recent strand of this conversation has been taking place within the pages of the journal *Zygon*. See, for example, Andrew B. Torrance, 'Should a Christian Adopt Methodological Naturalism?' *Zygon: Journal of Religion and Science* 52 (2017), 691–725; John Perry and Sarah Lane Ritchie, 'Magnets, Magic, and Other Anomalies: In Defense of Methodological Naturalism', *Zygon: Journal of Religion and Science* 53 (2018), 1064–1093; Torrance, 'The Possibility of a Theology-Engaged Science: A Response to Perry and Lane Ritchie', *Zygon: Journal of Religion and Science* 53 (2018), 1094–1105; Mark Harris, 'Apocalypses Now: Modern Science and Biblical Miracles: The Boyle Lecture 2018', *Zygon: Journal of Religion and Science* 53 (2018), 1036–1050; John Hedley Brooke, 'The Ambivalence of Scientific Naturalism: A Response to Mark Harris', *Zygon: Journal of Religion and Science* 53 (2018), 1051–1056; Mark Harris, 'On "the Natural Nature of Naturalism": Answers to John Hedley Brooke's Questions', *Zygon: Journal of Religion and Science* 53 (2018), 1057–1063.

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1. Unlike those who regard science and religion as separable activities, as responsible for different realms, or as involving intrinsically different kinds of explanation, providential naturalists develop and rely on an integrated understanding of the world, one in which elements often identified as *either* religious *or* scientific are instead regarded as part of a single holistic vision of how the world works. In this understanding of things, natural causality is a consequence of the providential naturalist's prior convictions about God's providential guidance of the world. God is providentially guiding the created order, yet that guidance leads to a significant degree of regularity in nature. That regularity allows natural causality to shed considerable explanatory light on many phenomena. Natural causality, in other words, explains phenomena because of the way that God providentially guides the created order. Natural causes are one means by which God carries out God's plan.
2. While providential naturalists can be full naturalists, historically many have been partial naturalists, for whom the proportion of phenomena throughout history that are the product of natural causality is less than 100 per cent. For partial naturalists, miracles that natural causes cannot account for are not only possible but also have occurred in history.
3. Providential naturalists regard the natural world as a communicative medium. Historians have traced how Christians in the patristic and medieval eras engaged in the symbolic interpretation of nature, and how those interpretive practices gradually fell away and were replaced by a variety of alternative accounts of nature – mathematical, taxonomic, and otherwise – in the early modern era, thanks in part to a heightened focus on the literal sense.[3] To the extent that the figures discussed here are representative, their work shows that other kinds of theologically informed interpretation of nature were genuine options during early modernity. Their interpretations reflect the expectation that what happens in nature is in some way calibrated

[3] Hans Frei, *The Eclipse of Biblical Narrative: A Study in Eighteenth and Nineteenth Century Hermeneutics* (New Haven: Yale University Press, 1974); Peter Harrison, *The Bible, Protestantism, and the Rise of Natural Science* (Cambridge: Cambridge University Press, 1998); Peter Harrison, 'The Bible and the Emergence of Modern Science', *Science and Christian Belief* 18 (2006), 115–132. For commentary on Harrison's thesis see Jitse M. van der Meer and Richard Oosterhoff, '*The Bible, Protestantism, and the Rise of Natural Science*: A Response to Harrison's Thesis', *Science and Christian Belief* 21 (2009), 133–153; Peter Harrison, '*The Bible, Protestantism, and the Rise of Natural Science*: A Rejoinder', *Science and Christian Belief* 21 (2009), 155–162; Scott Mandelbrote, 'Early Modern Biblical Interpretation and the Emergence of Science', *Science and Christian Belief* 23 (2011), 99–113.

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both to human actions, and to divine expectations regarding human actions. The idea that what happens in nature may communicate something to humanity suggests that, for these providential naturalists at least, understanding nature means more than gaining a causal understanding of what happens. It also means grasping the meaning or significance of what happens, either for themselves or for others.

4. Early modern English Protestants were generally of the opinion that there are more and less appropriate ways of conducting one's life given that God is providentially governing all things in the created order. Among providential naturalists such as those we have been examining, the fact that natural causes are responsible for many phenomena that one might otherwise think of as miraculous, and that many occurrences in nature do not in fact convey divine messages to humanity, correspond with expectations about how one's piety should be expressed. For these early modern figures, the Christian life should be marked by a supreme trust in God's sovereign goodness and faithfulness, and by a corresponding fearlessness towards whatever happens in nature.

The providential naturalist's integration of natural causality within providence is made possible by their understanding of the relationship between God's action and the action of created entities, an understanding that relies on prior ideas about how the order in the world arises. Among the intellectuals we have looked at, the order of the world emerges either because creatures are fundamentally how an Aristotelian describes them, or because things in the world operate according to a laws-of-nature conception of order. According to an Aristotelian, created entities possess causal powers of their own, and those entities can bring about changes, or effects, in other parts of the created order through the directed application of those powers. For those who subscribed to a laws-of-nature view of order, created entities are subject to, and thus abide by, a set of laws that dictate what they can and cannot do.

God's relationship to the world follows from the way in which order is understood.[4] For those who view the world like an Aristotelian, God's

[4] Other ways of conceptualising the God-world relation have also been proposed beyond these two options. Among those of a metaphysically deistic bent, God sets the world in motion, but is not involved in its ongoing maintenance and activity. For advocates of what Alfred Freddoso has called a 'mere conservation' view, God both creates and conserves all created entities, but all creaturely acts are not simultaneously divine acts (as they are for the concurrentist). Alfred J. Freddoso, 'God's General Concurrence with Secondary Causes: Why Conservation is Not Enough', *Philosophical Perspectives* 5 (1991), 554.

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relationship to the world is typically described in terms of things like primary and secondary causality or concurrence. This way of looking at things tries to hold simultaneously onto two claims: first, that God creates and holds all creatures in being, gives them the powers that they possess, and acts as the creature acts; and second, that creatures themselves possess genuine causal powers that truly bring about effects in the created order. For those who instead hold to a laws-of-nature conception of nature's order, God's relationship to the world is generally understood in terms of occasionalism, in which God is the only cause of all effects. For the occasionalist, says theologian Simon Oliver, 'creatures are not really creatures; they are amalgams of passive material stuff that become the occasion for God's action'.[5] Occasionalists do not regard created entities as having any real causal power, and so they are not worried about trying to maintain a balance between the two aforementioned commitments that advocates of concurrence care about.[6] Because of how they conceptualise divine action in relation to creaturely action, providential naturalists see divine action as the basis for everything created. Created entities simply would not be possible without divine action; put another way, divine action is what makes creaturely causal activity possible in the first place.

By seeing providence as foundational and natural causality as a consequence of providence, providential naturalists invert a fundamental assumption made by those who assume that Christians deploy God-of-the-gaps reasoning. For their detractors for whom natural causality is fundamental, Christians are often thought to invoke God to explain those things that cannot yet be explained through natural causality. This logic drives their criticisms of 'religious' explanations (outlined at the start of Chapter 1), which they see as gradually being swept away throughout history by science's naturalistic ones. Regardless of whether God-of-the-gaps reasoning is philosophically legitimate or not,[7] what is worth noting here is that for providential naturalists, by contrast, theological claims about

[5] Simon Oliver, *Creation: A Guide for the Perplexed* (London: T&T Clark, 2017), 123.

[6] Recall from the discussion of Thomas Burnet (Chapter 6) that even though one may hold to a laws-of-nature conception of order, and thus to an implicitly occasionalistic understanding of God's relationship to the created order, one encounters figures who nevertheless still speak in terms of primary and secondary causation and who reason in ways that reflect a concurrentist's view of things. Reasoning consistently through the metaphysics of providence, David Bentley Hart argues, is not easy. See David Bentley Hart, 'Providence and Causality: On Divine Innocence', in Francesca Aran Murphy and Philip G. Ziegler (eds.), *The Providence of God: Deus Habet Consilium* (London: T&T Clark, 2009), 34–56.

[7] Robert Larmer, 'Is There Anything Wrong With God of the Gaps Reasoning?', *International Journal for Philosophy of Religion* 52 (2002), 129–142.

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God come first, and the idea that natural causality can explain things in the world flows from how God's provision for nature, and God's action in and through natural processes, is understood. Natural causality thus might be said to have penultimate, rather than ultimate, status for the providential naturalist. From this perspective, science (or more precisely, naturalistic explanation) can explain phenomena in nature only because God's government arranges the operation of created entities in ways that make natural causality causally efficacious and therefore explanatorily powerful.[8]

Insofar as providential naturalism is an explanatory approach that sits outside the historically contingent categories 'science' and 'religion', it represents a useful vantage point from which to see some of the limitations of looking at the world through the lenses created by these categories. Recall (from Chapter 1) Stephen Jay Gould's contention that science is about the coordination and explanation of facts, whereas religion is about values, meaning, and purpose. From the perspective of the authors we have been looking at, to separate causes and meanings into two different realms is to rent asunder a world in which these two are inherently bound up with one another. Gould is right to see religions as concerned with meaning, yet many religions in history have also cared about appropriately accounting for the causes of phenomena, suggesting that an integrated understanding of nature must embrace both meaning and causes.[9] Gould is also right to say that science cares deeply about coordinating and explaining facts, but if scientists ignore meaning then they risk failing to attend to things that many see as genuine features of the world that we inhabit, and in doing so they prevent religious ideas about how the world works from having any impact on how phenomena are understood and explained.[10] Each of these categories, the providential naturalist might therefore say, provides an incomplete outlook on the world. From the providential naturalist's perspective, the idea of competition between explanations also looks quite different. Different providential naturalists may propose different explanations for a phenomenon, but any competition between them will occur not at the level of 'religious' explanations (which rely on divine action)

[8] For a recent examination of some of these issues see Lydia Jaeger, 'Against Physicalism-Plus-God: How Creation Accounts for Divine Action in Nature's World', *Faith and Philosophy* 29 (2012), 295–312.

[9] Richard Dawkins is close to grasping this point in his criticism of Gould's failure to see religions as explanatory: Richard Dawkins, 'When Religion Steps on Science's Turf: The Alleged Separation Between the Two Is Not So Tidy', *Free Enquiry* 18 (1998), 18–19.

[10] Simon Oliver's observation – that the 'way one investigates natural phenomena will very much determine what one sees and, crucially, *what one does not see*' – is apposite here. Oliver, *Creation*, 128, emphasis in original.

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versus 'scientific' ones (which draw on natural causality).[11] Rather, it will occur either between partially naturalistic and fully naturalistic approaches or between partial naturalisms from different points along the providential naturalism spectrum.

The Complexities of Providential Naturalism

The four elements laid out above constitute a foundational set of commitments that providential naturalists in any time and place will hold. Their precise formulation will depend on the many assumptions and judgements that accompany and inform them, and which must be made to flesh them out. The figures we have looked at, for example, each counts as providential naturalists according to these four primary elements, but each deploys a slightly different variant from the others because of variations among these underlying assumptions and judgements.

Based on the challenges that we have identified in each of the historical episodes we have examined, some of the more significant complexities awaiting anyone wanting to implement any version of providential naturalism can be rendered in the following general terms.

Nature's Boundary

One of the most vexing questions the providential naturalist must face is where the boundary of nature resides. That is, what are the limits of what natural causes can do, so that one knows when to claim that a miracle – understood here as something above and beyond what created causes can do – has occurred?

Among the early modern figures we have studied, it is simply assumed that there are phenomena that cannot be generated by the natural causal activity of created entities. One of the ways they think one might see where the boundary between the natural and the miraculous is located is through the size of miraculous effects; recall Spencer's assertion here that Jesus' miracles were of such magnitude that no one could have any doubt about their supernatural origin. Others like Charleton argue that one

[11] As John Hedley Brooke rightly notes, 'The important lesson is that in late seventeenth-century natural philosophy it was possible to describe the same events in terms both of natural (or 'secondary') causes and of divine Providence. It was not a question of either/or, as it became for later polemicists'. John Hedley Brooke, 'Science and Theology in the Enlightenment', in W. Mark Richardson and Wesley J. Wildman (eds.), *Religion and Science: History, Method, Dialogue* (New York: Routledge, 1996), 7–27, 7.

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should be able to tell when supernatural effects happen by investigating the phenomena through natural philosophy. The reasoning here is simple: if one cannot account for a phenomenon in terms of the known principles of natural philosophy, then the occurrence must be miraculous.

Although it may in principle be possible to distinguish between natural and miraculous effects in these ways, doing so in practice will be difficult. A major challenge for distinguishing between the natural and the miraculous is that we almost certainly do not understand the full extent of what natural processes can accomplish, and thus what natural causality can explain. We are still encountering new phenomena in nature, and scientists are constantly uncovering the mechanisms responsible for others.[12] As a result, we do not know what new forces and laws remain undiscovered. Neither do we know to what extent our existing theories will continue to account for what happens in nature as new phenomena are explored and new features of nature are discovered, or whether those theories will need to be overturned and replaced by more expansive ones. Crucially, the incompleteness of our causal knowledge of nature's processes is an ongoing fact that human knowers of nature will continue to face for at least the foreseeable future, and perhaps forever. That incompleteness is reflected historically in the frequency with which the prevailing theories that describe and predict how nature operates change. Sometimes that change is incremental, while at other times it is revolutionary.[13]

Because we cannot know for certain whether a given phenomenon thought now to be miraculous will in the future be explicable naturalistically, it is difficult to say with absolute confidence that natural causality will *never* be able to account for a particular phenomenon, and therefore that this phenomenon *must* be miraculous. Although it may indeed be the case that some occurrence in nature is never going to be explicable through natural causality, we can never be entirely sure that a naturalistic explanation will not become available at some point in the future.

Determining the limits of nature is for many Christians made complicated by their desire to give an appropriate place in their deliberations to authoritative texts like the Bible. The Bible contains numerous narratives about events that purportedly took place at specific times and in specific

[12] A comparable challenge for the early modern providential naturalist is rare but ultimately natural irregularities in nature. These are phenomena which are produced by natural causes, but which were often thought to be miraculous because they are rare and did not seem to be possible according to what was known at the time about how nature operates.

[13] On revolutionary changes in science, see Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1996).

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places in the past. Because of how those occurrences are narrated, they have often been thought to be miraculous and therefore inherently inexplicable through natural causality. Insofar as the Bible is regarded as portraying historical events, the perception that those occurrences are miraculous may influence which phenomena are naturalistically investigated. If it is decided that certain occurrences are off-limits, then whatever may be learned about nature's limits from those events will forever be excluded from consideration.

Many providential naturalists, we have seen, claim that nature has a boundary beyond which miracles lie. There is in principle a point at which they will cease looking for a naturalistic explanation of an occurrence and will claim that it is miraculous. This is not because they deny the explanatory power of natural causality in general. Rather, it is because they become convinced that natural causality will never be able to provide an explanation. For those who identify as scientists or who see science as the proper realm within which phenomena should be explained, by contrast, there is no such point at which natural causality ceases to work. In the mindset of the scientist, there is no boundary to nature,[14] so there is no end to the search for understanding and explanation through natural causality. Science is inherently insatiable in this regard. The scientist *qua* scientist expects to continue searching for a new theory, or new principles, until a given phenomenon can successfully be accounted for in a naturalistic manner. As participants in a never-ending pursuit, scientists will never stop searching for naturalistic explanations of phenomena. To ask a scientist to stop looking for such an explanation at the point at which their theory fails is to ask them to stop being a scientist.

Providential naturalists who think that miracles constitute a real boundary to nature, and who think that science can help to discern the boundary between the natural and the miraculous, thus will find themselves in the paradoxical position of doing or supporting science while disagreeing with

[14] This is the case for either the methodological or the metaphysical naturalist. The methodological naturalist, as we saw in Chapter 1, puts their personal convictions about the way nature works aside and assumes that naturalistic explanation will eventually be able to account for all phenomena in nature; that is, they proceed as if there were no supernatural agents. The metaphysical naturalist thinks that everything can be accounted for by natural causality because they think there are no supernatural agents (Dawes, *Theism and Explanation*, 3). For a succinct exploration of both methodological and metaphysical naturalism see Paul R. Draper, 'God, Science, and Naturalism', in William J. Wainwright (ed.), *The Oxford Handbook of Philosophy of Religion* (Oxford: Oxford University Press, 2007), 272–303.

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one of its central assumptions.[15] As proponents of Intelligent Design have discovered, anyone who claims that there are limits beyond which science cannot go, and who attempts to put the brakes on scientific work, risks the ire of those for whom science is intrinsically limitless.[16] If their experience is anything to go by, in a secular-minded scientific culture this paradoxical position will be a difficult one to defend and maintain. Only by giving up on the idea of a boundary in nature and becoming either a providential full naturalist like James Clerk Maxwell and his fellow Victorian theistic scientists, or a methodological naturalist who ignores his or her own ideas about providence, will a Christian be able to support wholeheartedly a limitless version of science.[17]

Nature's Communicativity

As we have seen, the idea that nature is communicative is a central one for the early modern providential naturalists we have examined. For each of them, at least some events in the created order convey a message to human beings. Their accounts of nature's communicativity lack detail, however, and they generally sidestep the crucial question that providential naturalists must ask in this arena: how do we know what, if anything, is being communicated through nature?

[15] Richard Westfall has argued that Walter Charleton's willingness to toggle between the natural and the supernatural – that is, his partial-naturalism tendency to invoke natural causation at some points and miracles at others – is problematic because it obliterates 'any meaningful concept of natural law and natural order'. When carried to what he calls its 'logical conclusion', Westfall says that Charleton's position 'would remove every action from the realm of natural causation to the sphere of the supernatural', and would thereby preclude the possibility of scientific investigation. (Richard Westfall, *Science and Religion in Seventeenth-Century England* (Ann Arbor: University of Michigan Press, 1973), 82.) Though Westfall's logic may be sound, there is little in the work of Charleton or the other providential naturalists we have looked at to suggest that they are worried that the possibility of miracles might jeopardise their pursuit of naturalistic explanations. For the providential naturalist, it is providence that makes the regularities of nature that we study and know through science possible; miracles may interrupt that order, but they are simply a feature of the way things are. Rather than wanting to protect a realm of law and order from unwanted incursion by God – a concern that looks a lot like the desire to protect the 'scientific' realm of nature from 'religious' incursions of any kind, one that reflects the view that natural causes are more basic than God – providential naturalists, these early modern exemplars indicate, instead want their explanations of phenomena to reflect the actual causes responsible for those phenomena, regardless of whether those causes are natural or not.

[16] Think here of the criticism levelled at Intelligent Design advocates of the specified complexity explanatory filter, which purports to find the point at which non-directed natural process stop and intentional design begins. For a helpful overview of the issues at stake in Intelligent Design see Robert T. Pennock (ed.), *Intelligent Design Creationism and Its Critics: Philosophical, Theological, and Scientific Perspectives* (Cambridge: MIT Press, 2001).

[17] These alternatives are discussed in greater detail in Chapter 1.

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The relationship between the causes involved and the communicativity of a given phenomenon is a complicated one. On the one hand, figures like Spencer seem to think that providing naturalistic explanations of phenomena that had previously been thought to convey some sort of meaning is one avenue by which meaning can be stripped from those phenomena. The logic here seems to rely on the assumption that only miraculous occurrences can bear meaning, so if an occurrence can instead be explained by natural causes, then it cannot convey a message of any kind. But on the other hand, Burnet assumes that phenomena that can be explained naturalistically can in some situations simultaneously bear divine meanings. If Burnet is right, then naturalising phenomena need not necessarily erase their communicative possibilities.

The question of how we can know what is being communicated by a given phenomenon involves grasping more than just the underlying causal reality. One reason why Balmford, Spencer, and Charleton are wary of how phenomena were being read by their contemporaries is because those readings were connected to problematic behaviours that they regarded as inconsistent with how Christians should act. Emphasising these behavioural implications becomes for them a critical justification for reining in the interpretive flights of fancy of their contemporaries. Yet no matter how problematic some people's behaviour in response to certain occurrences in nature are thought to be, their response does not rule out the possibility that those occurrences were in fact communicating something. The behavioural critique of nature's communicativity largely sidesteps the epistemic question of how we can know what nature is communicating.

The challenges involved in determining what nature communicates stem from, and are similar to, those facing anyone seeking to learn a foreign language from scratch: a lack of understanding of the meaning of the sounds and gestures that constitute that language. When human beings grow up in communities that share a common language, they gradually learn (through repeated exposure and correction from the language's proficient users who surround them) what is signified by the sounds and gestures. If one is not immersed in a second language as a child, one will learn that language through instruction mediated by one's first language. From whom, though, should one learn the language of nature? There is no universally agreed-upon set of meanings that it is understood to speak and no single community that preserves and passes those meanings on. Some might claim that modern science is trying to uncover the language of nature, and assert that if one wants to learn its language, one must immerse oneself in the worldwide community of scientists. But modern

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science typically excludes communications of the kind that religious persons think nature at times exhibits. For the scientist, nature makes many gestures, but those gestures typically signify nothing; 'religious' meanings are rejected out of hand as impositions from human beings on otherwise barren physical processes. To make matters more complicated, among those who think that these 'religious' meanings are legitimate, there is (as the figures we have looked at suggest) a range of ways in which those meanings are frequently understood. Each religious community may think that it properly understands nature's language, but what happens when those communities disagree with one another?

By what means, then, might one reliably come to know what phenomena in nature communicate? Sometimes nature is approached with a consequentialist lens, with the expectation that one can directly read the meaning of some occurrences from the consequence (positive or negative) that it has on us. Others look to a third source, one containing a key that reveals nature's meaning. For many Christians, including those whom we have looked at in this book, the Bible serves as that key. The meaning of certain past biblical events, they claim, is provided within the Bible's pages. Attempts at gleaning or inferring the meanings of other phenomena not depicted there are sometimes made by analogy to events in the scriptures whose meanings are given, or on the basis of some scriptural claim taken as relevant to the situation at hand. Whatever the precise means may be, the point here is that the Bible reveals what the signifier signifies.

The challenge for Christians who look to the Bible for guidance here is discerning and defending the criteria by which the Bible's insights on nature's meaning should be applied. Does the fact that there have been events in the past that bear divine meaning mean that there continue to be such events? Are there principles or lessons to be learned from those past meaning-bearing events that can be learned and applied to more recent phenomena to rightly grasp their meaning(s)? What do those principles and lessons look like, and what are the limits of their applicability?

Another difficulty for the providential naturalist in this arena is the challenge of discerning the intended audience of a given communication from nature. Without a clear guide to help interpret the correct meaning of a message, it may be difficult to know who the intended recipient was. In such contexts, rules of thumb may emerge – the person who suffered some illness or injury must have deserved it, and thus it must be intended only for him; if a dramatic aerial phenomenon can be visible across a whole town, then the message must be meant for the entire populace – but in the absence of an authoritative interpretive key, all such rules will only ever be guesses and conjectures.

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The early modern authors we have looked at want to retain the possibility of nature's communicability despite not addressing these complexities explicitly. Yet perhaps as a sign of the difficulties involved in discerning the meaning of what happens in nature, each of them seems to accept that human beings may never fully grasp why things happen as they do. In their admissions of ignorance about the meaning of events, these authors concede that living in a providential world means acknowledging that human beings suffer from a fundamental lack of understanding of why things are the way they are. These early modern intellectuals may be critical of many of the spurious interpretations of occurrences in nature that their contemporaries propose, but that does not mean that they have alternative meanings to advance in their place.

Living in Nature

The question of the manner and extent of nature's communicativity is in the early modern mind linked to another issue: normative expectations about the ways human beings should react to occurrences in nature. The criticisms of specific affective and behavioural responses to occurrences in nature that we have been looking at rely on perceived connections between knowledge of the causal structure of reality and the responses that are thought to properly follow from that knowledge. For Spencer and Charleton, for example, it is not wrong to feel fear, but it is wrong to feel fear in the wrong contexts. Specifically, it is right to be fearful if God is speaking against one in judgement, but it is a problem if one experiences that same fear even though God is not speaking to one in such a manner. Because phenomena that can be explained naturalistically are not miraculous and therefore do not convey messages from God, so their reasoning goes, it is wrong for those phenomena to elicit fear in us.[18] Fear for them thus serves as a useful index of the extent to which those suffering from it fail to grasp the true causes involved in certain phenomena.

Burnet and Whiston's providential naturalisms, which allow naturally caused phenomena to serve as communicative moments, complicate this picture. If they are right in thinking that God can use natural processes to communicate with human beings, then it may be appropriate in certain circumstances for the recipient's response to naturally caused phenomena to be tinged with emotions like fear. But if that is the case, then fear

[18] Recall that for Charleton, those who properly understand physics and metaphysics are right not to cower before (naturally caused) thunderbolts.

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cannot so straightforwardly be used to distinguish the causally knowledgeable from the causally ignorant, because fear may be a fitting reaction to either natural or miraculous phenomena. Using specific affective and behavioural responses as markers of knowledge of the actual causes involved, then, can work only if two conditions are met: first, if naturally caused phenomena never serve as divine messages, and only miraculous ones do; and second, if the 'correct' affective and behavioural responses to communicative and non-communicative phenomena are clear, universally agreed upon, and easily distinguishable from one another.

The early modern writings we have looked at suggest that not all providential naturalists will agree on the first of these conditions. Agreement on the second also seems unlikely. What *are* the appropriate affective and behavioural responses to either natural or miraculous phenomena in nature? If nature is communicating something from God, how should we respond to that message? Presuming the message is clear – and as we have seen from the many questions raised above, this is a big assumption to make in most circumstances – where should we look for guidance on the right way to behave in response? Answers to these questions will depend on the anthropology – that is, the picture of what human beings are, what they are for, and what a flourishing life looks like – that is being assumed.[19] As with many areas of theological reflection, Christians vary considerably in their anthropological views, not least because they integrate the different sources upon which those views rely – philosophy, science, history, theology, the Bible, and others – in a variety of ways, and generate a range of different pictures of what a flourishing human life looks like as a result. With agreement about the details of how human beings should live even among Christians difficult to come by, contestation over the right way(s) to respond to occurrences in nature seems inevitable.

Promissory Providential Naturalism

These challenges suggest that many of the complexities that arise when implementing providential naturalisms are generated by various limitations in what human beings do, and can, know. As we have seen, there are a vast number of assumptions, judgements, and prior commitments

[19] As we saw, Spencer provides only the bare minimum of positive content of his anthropology, spending most of his time criticising those things that he does not like rather than laying out his understanding for how things are and should be. But he is working with an anthropology insofar as he assumes that some ways of acting and feeling in certain contexts are superior to others.

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involved in determining where the boundary between the natural and the miraculous lies, in asserting a particular position on the communicativity of nature, and in developing a specific view of human flourishing. In each of these areas there are many relevant facts that we do not know for certain, and likely will not ever know for sure. Because of these epistemic limitations, and because of the intricacy of the theological issues involved, providential naturalism is a space in which intra-Christian disagreement and argumentation appear to be inevitable. Implementing providential naturalism in a manner that will be convincing to all Christians who believe in God's providential government of the created order, and who think that this government gives natural causes considerable explanatory power, may therefore be impossible. There is simply too much scope for disputation and difference of opinion about all manner of issues relating to its operationalisation. The fact of its internal complexities and differentiation instead suggests that providential naturalism is likely to generate endless arguments over how to implement it and that no one variant of providential naturalism will be representative of all.

Does that mean that Christians are wrong to try to develop religiously inflected explanatory frameworks such as providential naturalism? Although we have not conducted the aforementioned philosophical analysis that might be necessary to definitively answer this question, the early modern intellectuals who have appeared in these pages give us no immediate reason to think that providential naturalism is fundamentally incoherent or represents an inherently problematic or ill-conceived way of looking at the world. Each of the four principal ingredients of providential naturalism described above represents common views within the history of Christianity; for the figures we have been looking at, they can also be held simultaneously without difficulty. Their writings suggest that providential naturalists can be confident that bringing their theological convictions to bear on understanding and explaining phenomena in these ways is intellectually defensible, even if those who do so are unlikely to agree with each other about how their explanatory frameworks should be implemented.

If providential naturalists are right, then one can embrace natural causality and naturalistic explanation – a core commitment of science and of its precursor, natural philosophy – without giving it metaphysical priority and thereby giving up on providence and the possibility of meaning.[20]

[20] On the connections (or lack thereof) between methodological naturalism's historical explanatory successes and metaphysical naturalism, see Peter Harrison, 'Naturalism and the Success of Science', *Religious Studies* 56 (2020), 274–291.

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Yet as past attempts at this embrace also indicate, developing explanations that hold on to all the elements that providential naturalists care about is a messy and difficult task. Wading into that complexity may be necessary for anyone who thinks that God has something to do with how the world works, and who thinks that scientific approaches, while tidier, miss important features of the world. But the complexities of providential naturalism that we have identified here must mean that any variant of it will always be speculative in nature. Any specific instantiation of it will forever be open to questioning and criticism from those sitting at different places along the providential naturalism spectrum, or who have different views about the communicativity of nature, or of the right way we should live, or who think differently about the world's relationship to God, or who hold other metaphysical and theological commitments.

Although providential naturalists may regard their own view of things as sensible, coherent, and habitable,[21] this possibility of alternative configurations suggests that any variant should be regarded as promissory in nature. Lorraine Daston's work on facts and evidence in early modernity is instructive in this regard. Describing late medieval efforts to naturalise marvels and portents, Daston suggests that for many who insisted on naturalistic explanations at that time, theirs was a 'promissory naturalism', based more on 'metaphysical faith' than on 'scientific competence'. As she writes, 'It is the possibility in principle, not the actual availability of a natural explanation that counted here'.[22] In other words, the naturalism promoted by these medieval figures was one they could not back up through detailed explanations of the mechanisms involved. It was, rather, a position based on the promise that, were one to have the requisite insights and knowledge, one would see that a naturalistic explanation was indeed warranted in certain situations, and that natural causality would adequately account for whatever phenomena were involved in those situations.

If these early modern figures are any indication, providential naturalism constitutes a plausible yet elusive framework for understanding phenomena in nature. Its elusiveness derives from (among other things) the difficulties involved in identifying decisively the boundary of nature, in

[21] Habitability refers to the extent to which a relatively settled set of ideas, practices, rituals, ways of looking at things, and institutional commitments 'can be lived, and be sustained across the generations, and provide its inhabitants with resources to meet the challenges of a changing and crisis-ridden world'. Mike Higton, *Christian Doctrine* (London: SCM Press, 2008), 369.

[22] Lorraine Daston, 'Marvelous Facts and Miraculous Evidence in Early Modern Europe', *Critical Inquiry* 18 (1991), 93–124, 101.

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determining conclusively in what ways the world is communicative, and in resolving definitively the question of how one should live. That elusiveness suggests that anyone adopting it should regard themselves as a promissory providential naturalist. The fact that providential naturalisms are complex wholes woven together from a vast range of commitments, assumptions, and judgements, and which require the navigation of significant – and potentially unresolvable – complexities and challenges along the way, suggests that the best a providential naturalist can hope for is that their own explanatory framework is close to how things truly are.

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