Introduction
The cosmological imperative

πάντα δι' αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ
ἐγένετο οὐδὲ ἕν.

All things came into being through him, and without him
not one thing came into being.
John 1:3

The Christian doctrine that God is creator is as much a claim about the nature of the world in which we live as it is about the world's origins or the shape and destiny of the self. And yet theologies addressing the theme of the creation in the modern period tend to focus primarily upon the creatureliness of the self, developed in terms of a theological anthropology, on the one hand and upon the world as product of divine action on the other. What is missing is a concern with the nature of the world as created, and the relation of the world as created with God, by virtue of its nature as world.[1] In the attempt to reconcile the traditional ways in which we speak about God with the ways in which science teaches us to talk about the world, contemporary discussions of science and theology have moved beyond the argument from design, seeking also to explore points of agreement between scientific and theological method and between a scientific

1. Stephen Toulmin drew attention to this deficit in his *The Return to Cosmology: Postmodern Science and the Theology of Nature* (Berkeley: University of California Press, 1982). The integration of science, cosmology and theology (together with ethics) has recently been attempted by Nancy Murphy and George F. R. Ellis in their *On the Moral Nature of the Universe* (Minneapolis: Fortress Press, 1996). See also Kathryn Tanner, *God and Creation in Christian Theology: Tyranny or Empowerment?* (Oxford: Blackwell, 1988); Dan Hardy, 'Christ and Creation', in *idem*, *God's Ways with the World* (Edinburgh: T. & T. Clark, 1996), pp. 114–31 and 'Creation and Eschatology', in *God's Ways*, pp. 151–70; Colin Gunton, *Christ and Creation* (Carlisle: Paternoster Press and Grand Rapids: Eerdmans, 1992) and *The Triune Creator* (Edinburgh: Edinburgh University Press, 1998).

and a theological understanding of the world.[2] In some cases there are certainly traces of an investigation of the world as created but these are inevitably closely tied to the data and insights of science. Whether viewed from the perspective of scientists interested in a theology of creation, or from the perspective of theologians who are concerned with the operation of divine causality within the world, modern theology, which is to say, post-medieval theology, shows an extensive deficit in its engagement with the *createdness* of the world.

There are many different ways of accounting for this state of affairs, which is the product of fundamental and complex changes in science and culture during the sixteenth and seventeenth centuries. But it may be helpful to point to two distinct uses of the term 'explanation' and to the rise of one at the expense of the other. The first use derives from Baconian science and is normative in science today. To explain is to understand the causes of something. It therefore offers a way of predicting, even of replicating, the phenomenon concerned. For Francis Bacon similarly, to know the essence of something is to know how it is made.[3] Amos Funkenstein has referred to this as 'ergetic', or technological knowledge.[4] Science from this perspective offers explanatory models for understanding why the world is as it is and is not other. But there is a second usage of 'explanation', which is akin to what Stephen Toulmin has described as a system-theory account of explanation, which renders an individual event intelligible by placing it within a broader scheme of things, based upon 'the principle of regularity'.[5] Explanation in this sense serves to establish the broader coherence of a set of beliefs by drawing more and more data within its scope. This is a kind of thinking which we do all the time, as

2. On scientific arguments for the dynamic openness of the world, and thus its availability to divine power, see for instance A. R. Peacocke, *Creation and the World of Science* (Oxford and New York: Oxford University Press, 1979), pp. 104–11 and 209–11 and *Paths from Science towards God* (Oxford: Oneworld Publications, 2001). See also John Polkinghorne, *Science and Providence* (London: SPCK, 1989), *Reason and Reality* (London: SPCK, 1991) and his more recent edited volume *The Work of Love. Creation as Kenosis* (London: SPCK, 2001).
3. Francis Bacon, *Novum Organum*, Book II, Section 5 (*Works*, vol. I, pp. 230–1).
4. Amos Funkenstein, *Theology and the Scientific Imagination: from the Middle Ages to the Seventeenth Century* (Princeton: Princeton University Press, 1986), pp. 12 and 290–327.
5. Stephen Toulmin, *Foresight and Understanding* (New York: Harper and Row, 1963), p. 39. Toulmin borrows this term from Copernicus' *Commentariolus* by which Copernicus intended to make a clear distinction between scientific explanation as *prediction* and scientific explanation as *understanding*. Toulmin points out that some efficient predictive systems, such as mathematical models for the movements of tides or of planets, for instance, have scant claim to be based on an understanding of the events they predict, whereas other successful scientific theories, such as Darwinianism, cannot be said to have any significant predictive value (in terms, that is, of the precise characteristics of new species that may evolve). See Toulmin, *Foresight*, pp. 18–43.

Quine has demonstrated, and it is indicative of the way in which a particular set of beliefs which we implicitly or explicitly hold to be true expands to fill the shape of our world.[6] We cannot be agnostic about everything for which we hold no firm evidence or of which we have no grounded understanding. Indeed, 'scientism' or a materialistic world-view which sits heavily on our society is itself a product of explanation in this second sense. The binding nature of scientific verification within the laboratory cannot be extended into more general questions about human reality or about the meaning and nature of the world without a substantial increase in subjectivism, which itself seriously conflicts with the scientific method. Most scientistic accounts of the world are shot through with a variety of materialistic and reductionist ideologies and subjectivities, only partially concealed.

Perhaps a better way of describing explanation in this second, systems-theory sense is as the production, deepening and extension of 'meaning', or what Werner Jeanrond has termed 'macro-hermeneutics'.[7] It is through the generation of meaning that we come to be at home in the world. It might be judged important, then, that the Christian community should have to hand an account or accounts of the meaning and intelligibility of the world as *created*. But the contours of contemporary faith are such that while we may believe ourselves to be the creatures of God, and the world to have its origins in the creativity of the divine will, we are making thereby little more than a claim regarding the proprietorship of the world, which is to say that the world belongs to God. Hence we are answerable to God for the ways in which we deal with it, against a secular view of the autonomy of the human. It is therefore almost purely political in its application. It is possible also that the contemporary importance of the claim that God created the world is a tacit acknowledgement on the part of the Christian community of the centrality which explanation in our first sense, as tracing the cause of a thing, has taken on in our culture. It might therefore represent an attempt to contest secularism on its own epistemological ground: by arguing that God is the ultimate *cause* and that those who know and understand the ways of God have most authority when it comes to pronouncing on ultimate causes.[8] But if this is the case, then it is clear that the emphasis among theologians on explanation in the first sense is at the cost

6. W. V. Quine, *Pursuit of Truth* (Cambridge, Mass.: Harvard University Press, 1990).
7. Werner Jeanrond, *Theological Hermeneutics* (New York: Crossroad, 1991), p. 4.
8. I would myself share Thomas Aquinas' scepticism whether human beings can ever grasp the meaning of a truly divine and total act of creation (see *Summa theologiae* (*ST*) 1, q. 45).

of explanation in the second sense, with the consequence that those who hold to a theology of creation (amongst whom of course we should also include Jews and Muslims) are significantly under-resourced with respect to grasping the meaning or intelligibility of the world specifically as created.

The first thesis of this book is that successive attempts to accommodate theology to modes of scientific reasoning, for all their legitimacy, may have distracted the theological community from a generous and creative exploration of the *meaning* of the world; and thus, in turn, have led to an inadequate reception of the theology of creation. Some might suggest that such a project is not necessary in itself. After all, the outstanding Christian theologians of modern times have managed perfectly well without it and a concern with the parameters of human existence, as we find in such foundational works as Schleiermacher's *Lectures on Religion*, Kierkegaard's *Philosophical Fragments*, Bonhoeffer's *Act and Being* or Rahner's *Spirit in the World* seem effectively to have taken the place of accounts of the nature of the world. But there is nevertheless one critical difference between the cultural and intellectual contexts of the period from the early nineteenth to the mid twentieth century and our own day. Over the last two decades we have seen an abundance of literature which has served to recontextualise scientific and technological thinking. This is not necessarily to be equated with what some might feel to be an uncompromising relativism, such as we find in Paul Feyerabend or Richard Rorty, but it can also be found in the careful detailing by philosophers of science of the ways in which science is shaped by its economic and social contexts.[9] We are more aware of the proper parameters of scientific reasoning than was the case in previous generations, and it is in this sense that we can take Michel de Certeau's observation that 'reason is placed in question by its own history'.[10] I am not advocating here the undermining of reason as such, however, but rather the recognition that there is a plurality of reasonings, just as we now more generally accept, and experience in our everyday lives, the existence of a plurality of knowledges. Those reasonings are in one way or another tradition-based. They exist only within a framework of specific terminologies and histories, and those that practise them must in some degree be formed within a community that reasons in the same way.

9. Stephen Toulmin, *Cosmopolis: the Hidden Agenda of Modernity* (New York: Free Press, 1990) and Nancey Murphy, *Theology in the Age of Scientific Reasoning* (Ithaca: Cornell University Press, 1990).
10. Michel de Certeau, 'The Black Sun of Language: Foucault', in *idem*, *Heterologies. Discourse on the Other* (Minneapolis: University of Minnesota Press, 1986), pp. 171–84 (here p. 179).

The second thesis of this book has the following form. Firstly, if reason itself is fundamentally the interface between ourselves and the world, then the way that we reason, our understanding of rationality itself, will extensively determine the ways in which we perceive and experience the world. Secondly, if the createdness of the world as content is effaced for us, then the powers and faculties that define the self as a centre of perception, feeling and consciousness in the world are also implicitly allocated to the domain of the non-creationist, which is to say, the secular. Sentience is a form of passivity: the self's own condition as ordered to its objects. Where those objects are predominantly determined as *quanta*, as precisely measurable space-time entities whose causal interactions are quantifiable as fields of force, then the human faculties themselves are ordered to the processes of quantification. It is this that underlies the privileging of technological reason and the dominance of what we might call a 'closed', or reductionist rationalism within our culture.

From the perspective of religion, and our communion with God, by far the most important consequence of this state of affairs is the disjunction between our sense of the divine and our ordinary perceptual experience. The vocabulary we use about ordinary perception and our knowledge of the world can be extraordinarily precise, but when we speak about knowing God, we refer to 'mysticism', 'spirituality' or 'religious experience', all of which are highly indeterminate, or indeed evasive, about which human faculties are in play. To some extent, of course, this is explicable as an acknowledgement that God is not an object and cannot be known as objects in the world are known. But it is indicative also of the deeper problematic which flows from the fact that the world is not known *as created* in our ordinary perceptions. Our knowledge of God is thereby not set in any kind of relation at all with our ordinary knowing, neither one of consummation nor of contradiction, despite the fact that according to the Christian doctrine of the creation, the world which we ordinarily know belongs to God and is of God's making.

Here the contrast with a pre-modern world-view is helpful. Since the createdness of the world was visible in its nature as world, in the medieval synthesis, the human faculties which were ordered to that world retained an openness from within to the knowledge of God the Creator. What we would today term 'religious experience' was understood in the pre-modern cosmos to be already implied in and intrinsic to ordinary cognition. It was figured either as the final stage in the ascent of the mind to God, drawn by the intrinsic momentum of a divine creativity at work in

the world, or as the radical negation of ordinary knowledge, that is, as 'unknowing' which is darkness from excess of light, or indeed as a combination of both.[11] The movement of negation denoted by the latter is not simply 'tagged on' to ordinary experience, nor is it a free-floating 'experience of negation', but it is rather a conceptual advance of a radically corrective nature which restores what we have inexactly termed ordinary knowing back to its foundation in an originary divine causality. 'Not knowing' becomes a necessary mode of knowing because the world on which all knowing is predicated is itself mysterious, bearing the marks of divine createdness within it. In other words, the lack of a coherent theological cosmology today has the consequence that our intimacy with God is set outside our intimacy with the world, and neither is fully integrated into the concept of createdness as revealing the deepest nature of the world in which – as creatures – we live.

It is the pre-modern cosmos, with its carnivalistic combinations of the theological and proto-scientific, which offers one of the best examples of an understanding of human reason as created and shaped in its depths by the createdness of the world. The pre-modern however is definitively a place to which we can never return. It was during the 'unmaking of the Christian cosmos' (in W. G. Randles' phrase[12]) from the sixteenth century onwards that the Christian Church suffered some of the most damaging and traumatic intellectual defeats in its history. This cosmology was predicated not only upon what proved over time to be a false understanding of the nature of the universe but also upon a concept of reasoning which identified *scientia* with authority or received traditions. It was a system of thinking which, being deductionist, operated with axioms which could not be questioned, and for which the foundations of knowledge rested ultimately upon a belief in the content and form of divine action that we would today consider to lie outside the realm of faith. Looking back upon that pre-modern world can easily become a futile exercise in a certain kind of cultural nostalgia. But it can also afford valuable insights into imaginative possibilities which have disappeared almost entirely from our own society. The first point to be noted is that – for all their indebtedness to Neoplatonism and Aristotelianism – the pre-modern models of the world were also an attempt to accommodate and listen to a number of scriptural passages which assert the cosmic dimensions of Christ as God's creative

11. See the section on Bonaventure's *Itinerarium mentis in deum* at pp. 36–42 below.
12. W. G. L. Randles, *The Unmaking of the Medieval Christian Cosmos, 1500–1760* (Aldershot: Ashgate, 1999).

and universal Word. The Old Testament repeatedly stresses the role of the divine presence who animates the world, whether as the Spirit or the Wisdom of God.[13] In the New Testament, the Gospel of John begins with the affirmation that it is the Word of God through whom 'all things came into being' (Jn 1:1–3), and in the letter to the Colossians we read that Christ is 'the image of the invisible God, the firstborn of all creation; for in him all things in heaven and earth were created, things visible and invisible, whether thrones or dominions or rulers or powers – all things have been created through him and for him' (1:15–16). Hebrews begins with a creationist hymn to Christ who 'sustains all things by his powerful word' (1:2–4), and in 1 Corinthians Jesus Christ is the one 'through whom are all things and through whom we exist' (8:6). In the Gospel of Matthew (11:19; 12:42) and again in 1 Corinthians in particular (1:18–31), deep associations are established between the creationist Wisdom tradition and the person of Christ.[14] As Colin Gunton pointed out, faith in Christ actually implies belief in him as the one through whom we and the world were made.[15] Our failure to think through what these passages might mean for our understanding of the world is a failure also of our Christology and our soteriology. It is a failure to grasp the meaning of the creation in its deepest *coherence*, as being the thematic key not only to the way the world is, but also to what and how we are, and to what God has given us of himself to hold and to understand.

Although possibly somewhat esoteric in character, semiotics, which is the science of signs, offers a succinct and formal account of the structure of meaning, and thus can offer us valuable insights into the relation between self and world. Pre-modern semiotics, in its fullest and most sophisticated developments, constituted what we can call today a 'triadic', or 'pragmatic', mode of reasoning. Stated simply, this was predicated upon the view that the world was created, and that the world's createdness included not only the human self but also the space or relation between self and world, which is the sphere of perception, feeling, imagining and reasoning. Its triadic form flowed from the intrinsic relatedness of self and world on the grounds of a common relation to the Creator God. It was thus a kind of reasoning which is consistent with and posited by a

13. See Psalm 33:6: 'By the word of the Lord the heavens were made, and all their host by the breath of his mouth.' See also Prov. 3:19: 'The Lord by wisdom founded the earth; by understanding he established the heavens.'
14. See also Eph. 1 for cosmological Christology.
15. Gunton, *The Triune Creator*, pp. 14–40.

theology of creation in its Jewish, Christian or Islamic form. Meaning, or reality, or world are formed within the coincidence of three elements: signs which signify, 'things' or *realia* which are signified and the people or interpreters for whom the signs refer. This is a kind of semiotics, or logic, which is particularly associated in the modern period with the work of the American pragmatist Charles Sanders Peirce, but it was already characteristic in the complex theological form of the work of those early theologians, including Origen, Augustine, Thomas and Bonaventure, who were operating within a creationist view of the world.[16] That type of reasoning, formulated within a thoroughgoing theology of creation, contrasts with the kinds of reasoning which emerged from the sixteenth century onwards and which show a dyadic, or binary, structure. In dyadic reasoning the human interpreter is not banished from the act of meaning but is in the service of Reason and its entourage which already sets out certain preconceived principles of knowing and thus of the world that is known. The reification of 'reason' as a *mathesis universalis* obscures the fact that what we really mean by reason (noun) are human beings who reason (verb): reasoning is actually an activity carried on by individual subjects at specific times and places. From a Christian perspective those individuals, and their communities, are God's free creatures alive in God's created world. Within such a context, reasoning has to be rethought, therefore, since it is now predicated upon a much more radical conception of the extent to which humans participate in the formation of reality itself. Reality is not a difficult script to be read, or a complex equation (or at least not that alone), requiring highly specialised skills and knowledge. It is not something that we either 'get right or wrong'. It is more fundamentally a place of invitation, a hosting by the divine creativity which takes ourselves to be integral to the performance of the infinite fecundity and goodness of God which is at the root of the world and its meaning.

The present volume represents an attempt to integrate the cosmological passages of Scripture into the contemporary theological mind. Its concern therefore lies with an inquiry into the nature of the world, viewed from a Christological perspective, and with thematics which spring from this, including the nature of the 'real' and the human faculties of reasoning and perception which are ordered to it. It attempts an integrated

16. It is Peter Ochs who has so importantly drawn our attention to the alignment between a pre-modern scriptural hermeneutic (in this case a rabbinic one) and contemporary pragmatics. See his groundbreaking study *Peirce, Pragmatism and the Logic of Scripture* (Cambridge: Cambridge University Press, 1998).

account of the self in the world, based upon a reading of the cosmological scriptural passages, and employing elements of contemporary philosophical thought which seem most suited to the development and articulation of a biblical theology of createdness.

In the first two chapters of the book, under the titles 'The architecture of createdness' and 'The metaphysics of createdness', I present a brief outline of the pre-modern cosmos firstly in terms of natural science and astronomy and secondly in terms of metaphysics, semiotics and historical reason. It is only through such an engagement with theological and proto-scientific systems from the past that we are able to grasp today what it means to live in a theophanic cosmos, in which the createdness of the world is powerfully accented. Everything in our own culture militates against such an understanding. In no sense, of course, am I advocating a return to a pre-modern world-view, in which proto-science and theology combined in ways that are unthinkable for us today. But nevertheless we can find instruction here as to the *possibility* of a theological account of the world's createdness. We can see also the immense effects of such a theology on an understanding of the self and of our relation to the world. The third chapter, 'Cosmological fragments', surveys the break-up of the classical synthesis with the rise of modern natural science, as exemplified in the work of Copernicus and Francis Bacon, and sets out some of the early attempts to reinstitute an integral cosmology. The intention here is to observe some of the principal strategies for recreating a sense of humanity's integration into the whole at the outset of the modern period. In the work of Winckelmann, this occurs through an appreciation of art, while in Jacobi we can see 'cosmic' transformations of the intellect. Winckelmann anticipates the 'aesthetic turn', therefore, and a modern transcendental epistemology of the 'sublime', while Jacobi points forward to the religious subjectivity of Schleiermacher and eventually to the tradition of 'religious experience'. Hamann is also included at this stage since we can see in his work a vigorous attempt to retrieve a theological cosmology through a distinctively Hebrew, language-centred and scriptural account of the world. Hamann therefore plays a key role in mediating something of the classical figurations of cosmic createdness in terms which derive closely from Scripture and yet which are free of their proto-scientific and essentialist dimensions.

In chapters 4, 5 and 6, I aim to set out a contemporary account of cosmic createdness through a close reading of scriptural passages which concern the speaking of God. The focus here lies upon a scriptural account of the

nature of language itself, and of the way in which human language is contained within and acts as a reflex of divine speech. This is a distinctively biblical view of language and it is one which contrasts with the classical conceptions of language which we otherwise inherit today. The primary locus of language, by this biblical account, is the divine speech itself, which is both revelatory and *creative* in the most originary sense that word can convey. The world comes about by virtue of the divine speaking. What we find here, therefore, is an intimate connection between speech and presence, which is to say, the presence of the Speaker, or God, the one who is addressed, and the world that is spoken about. All three form a unity. But presence, according to this model, is enfolded *within* language and is not extraneous to it. That presence, given with language, and the originary act of divine speaking, is also foundationally plural: each element coexists with the others and cannot be thought outside the context of the others. This plurality is central to the nature of the world, in which language is social, and there is a circularity about the ways in which we speak about the world and the way in which reality comes to meet us in our ordinary experience. A plural, multivocal world is also one which is open to and at times gripped by the divine speaking which, in the Gospel of Jesus Christ, is shown to be triadic. Culture is deeply determinative of the way we act and shape the world. But it is a plurality which is itself grounded in the nature of the divine speaking. The Gospel narrative of Jesus Christ shows that God's speech is in fact Trinitarian. We learn from this disclosure that the multivocity of the originary divine speaking is itself kenotic and compassionate, since – in the revelation which is through the Son and in the Spirit – God speaks with us and not with Godself alone. God must therefore come down to our level, as it were, becoming himself part of the world that is structured according to God's own breathing and speaking.

The second element in this middle section of the book is the use of a theory of the text in order to conceptualise the relation between the divine speaking and the world. The world stands to the divine originary breath/speaking as a written text does to the voice of its author(s). This parallel has a double value. In the first place it offers a model of the coinherence of God and the world which reproduces many aspects of the medieval system of analogy without, however, employing the Aristotelian model of causality which postulates a similarity between cause and effect. And secondly, while a theory of the cosmic text is not explicitly present in Scripture, it is deeply consonant with a scriptural account of the world. Texts, like bodies, are voice-bearing, and when the author entrusts their voice