

## Chapter 2

## The significance of the theology of creation within Christian tradition: systematic considerations

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### 2.1 What do we mean by the theology of creation?

The title of this book is bold: *God, Humanity and the Cosmos* covers a huge sweep of issues, not least in the area of theological thinking. The word 'Cosmos' figures here as a shorthand reference for the totality of finite reality, animate and inanimate. So, a key aspect of *God, Humanity and the Cosmos* is to explore how the relation between God and all-that-is-not-God is diversely understood and what it means to live within such understanding. Within Judaeo-Christian understanding this relation has traditionally been spoken of in terms of creation – all that is not God as being related to God as created to creator.

There is an important sense, therefore, in which the entire book is concerned with the theology of creation – with the question, that is, of how it might be possible in the contemporary world to articulate an understanding of the world as created? With this, what does it mean to live as self-conscious creatures? Indeed, is it meaningful to speak in terms of creation at all? Of course, in order to make sense of such questions we need to explore a wide diversity of insights. This is one of the integrating themes of the book and of the various particular explorations that are pursued here. Frequently, however, this integrating concern operates in the background with other windows more obviously to the fore. Thus, the purpose of this chapter is to focus directly on the theology of creation in order to inform these various other specific explorations. The aim is to give an initial sense of what the theology of creation is all about; to identify more specifically the key aspects of classical Judaeo-Christian theology of creation and their implications and, with this, to highlight the significance of this material for the science and religion interface.

Staying with the title of this book for a moment, the huge sweep says something about the immense range of interests and systematic concerns that are at work not just in the theology of creation specifically but in the search for theological understanding more generally. Science, for its part, is not just an amalgam of various bits and pieces but the concern for coherent understanding of the entirety of the natural world in naturalistic perspective.<sup>1</sup> So also theology, classically understood, does not

simply represent a vague collection of different bits and pieces of religious data but the concern to understand all things in relation to God. Aquinas spoke in this regard of theology as the study both of God and of all particular things in relation to God as their 'origin and end' (Aquinas, 1964a:1a.1.7,p.27).

This grand ambition at the heart of both science and theology *can* (but does not necessarily have to!) lead to their treading on each other's toes. Alternatively, it can lead to the view that science and theology are correctly to be seen as each taking a narrower and a broader perspective respectively on the one reality in a way that allows for mutual interaction. Rather than treading on each other's toes, one might picture this as a dance. In this way of thinking, science can be thought of as raising questions that only theology can tackle. In turn, it might be maintained that a necessary aspect of asking after the theological significance of anything, for example contemporary cosmology, is to seek also to understand it in naturalistic terms.

This view of theology in general and of the theology of creation in particular as concerned with the big picture – with understanding the relation between God and all that is not God, and what it means to live such an understanding – contrasts with the common assumption that creation simply concerns the origins and beginning of things. Controversies between evolutionary theory and theology on the one hand and cosmology and theology on the other have frequently served to reinforce this assumption by making it seem that what is at stake is simply differing accounts of the origins of things. However, in classical Christian theology of creation 'being created' is a phrase with past, present and future force. Not only does it claim that all things have their origin in God, it further claims that they are held in being by God and destined to find their flourishing in God. In an important sense, a biblical theology of creation stretches from the first words of the book of Genesis through to the closing vision of the book of Revelation and is at issue on every page in between. Aquinas even went so far as to say that creation refers first and foremost not to the claim that the world depends upon God as its originator but to the claim that all things depend upon God moment by moment for their existence (Aquinas, 1967:1a.46.2, p81). Even with an eternal world, he reasoned, it would be necessary to think of God as creator. Don Page, a cosmologist and collaborator of Stephen Hawking, makes a similar point about the Judaeo-Christian theology of creation:

God creates and sustains the entire Universe rather than just the beginning. Whether or not the Universe has a beginning has no relevance to the question of its creation, just as whether an artist's line has a beginning and an end, or instead forms a circle with no end, has no relevance to the question of its being drawn. (Page, 1998:742–3)

So, the doctrine of creation says something about the story of the world being a God-given, God-held and God-orientated story. The challenge at issue in this book is to explore whether it is still possible to view the world as God-narrated given the stories of things to be found in the natural sciences and, if so, how this might most fruitfully be done.

<sup>1</sup> On naturalism see 1.14.

## 2.2 Telling the story of creation

The language of story and of seeking to view things within the perspective of a God-given, God-directed story is quite a helpful way into what theology is about. Story or narrative is a fundamental part of human life. We are continually re-telling our own stories and as we do so we are concerned not just for the bare facts and sequence of events but for the meaning, order and purpose that we perceive in these facts and events.

More generally, story or narrative is almost a basic form of writing and presentation in the sense that, regardless of context, we always seek an orderly rather than confused presentation of the relevant material. An orderly presentation, moreover, that goes beyond the level of mere description in order to draw out the significance of things – think of a synopsis of legal proceedings, or a laboratory report, or an essay on recent movements in contemporary philosophy or theology. We tell stories of communities, groups and nations and celebrate such stories in festival: whether it be Christmas, Passover, or Thanksgiving. Again, the sciences tell us stories of the natural order of things as perceived within an entirely naturalistic perspective. For their part, religious traditions tell us stories of the meaning and purpose of things as perceived in relation to God and what the practical implications of this might be.

In the study of theology this underlying narrative structure is sometimes transparently obvious, such as in the New Testament gospels, or the story of Israel as recounted in the Hebrew scriptures. Indeed, a cursory reading of Genesis chapters 1–3 gives you the clear impression of narrative structure. At other times, the narrative structure of theology is less obvious, for example when we are exploring a doctrinal issue such as whether the Universe was created out of nothing – generally referred to as the doctrine of creation *ex nihilo*. Such issues can sound very conceptual and unrelated to matters of story. It is important to recognize, however, that even such explicitly conceptual, doctrinal issues flow from the attempt to draw out the implications of claiming that the world is to be viewed as a God-given, God-sustained, God-directed story in which we are participants.

The telling of creation stories is of course not unique to the Judaeo-Christian tradition. On the contrary, the telling of stories concerned to communicate a sense of the meaning and value of things in their totality ('Why?') and not simply to identify the causal sequence of how things got to be how they are ('How?') seems to be a universal human phenomenon. Modern scientific accounts are distinctive in prioritizing the how question over the why question. But even here, such narratives are frequently used in a way that goes beyond their strictly scientific focus in order to convey certain assumptions about the order and value of things – for example, a sense of deep unity in and through diversity and, for some, materialist nihilism.

Many stories of creation find their origin in the ancient Near East. Indeed, the context in which the Genesis narratives were produced was steeped in such creation stories (Lambert, 1965:294). Such stories are less to be seen as attempts in primitive science and more as explanations as to why things are as they are experienced to be ('aetiology'). One of the most famous of these is the Enuma Elish story deriving from Babylonia somewhere between the mid to late second millennium BCE and the sixth century BCE. It is worth reflecting that given that Israel's

patriarchal background is associated with this region (Abraham is regarded as deriving from Ur of the Chaldeans) and that Israel was taken into exile in Babylonia in the mid-sixth century, it is entirely likely that the biblical writers would have been aware of this story.

Against this background, it is fruitful to turn to examine the early chapters of Genesis. As we do so it is worth bearing the following questions in mind. What is being suggested about the character of the Creator? What about the character of reality? What is being said about the material world? What about human vocation? What kind of view of society is being suggested?

## 2.3 The creation narratives of Genesis 1–3

It is important to recognize that the Genesis narratives represent inspired scripture for living faith communities. For such communities they are not simply a source of academic or, indeed, historical discussion but are valued as a means of God speaking in the world. But under this broad notion there can be significant diversity in interpretation, both with regard to the nature of inspiration and with regard to the nature of the text.

For example, some Christians view the Genesis text as a disclosure of *how* exactly creation came into existence and not simply *why*. Such approaches are collectively referred to as 'Creationism'. However even here, it is important to recognize that there is a diversity of such creationist approaches (see Numbers, 1992, also Peters and Hewlett, 2003:Ch.4). Some believe in a creation that is only thousands of years old. Some view just the earth itself as being only thousands of years old but think of the universe in its totality as being much older. Others believe that the universe *appears* to be billions of years old but is in fact only thousands of years old. Thus God creates an 'old' universe with fossils already in the rocks.

In these views contemporary science is seen to be misleading compared to the evidence of scripture. Such views are dependent on seeing the Genesis text as a scientific history of God's creative acts. However, the current scientific picture of a Universe which is billions of years old cannot be dismissed lightly. The theories of modern science have gathered a very considerable consensus around them with a very considerable body of supporting evidence in their favour. Moreover, many of the scientists who explore the history of the universe in this way are devout Christians and Jews. Nor is this simply a scientific problem but also a theological one, for if God is the creator of all then creation should surely disclose something of God? God as creator, it might be reasoned, has authored 'the book of nature' as well as 'the book of scripture'. It is odd, therefore, on theological grounds to think of the book of nature and the book of scripture as standing in fundamental conflict with each other.

Other approaches to the Genesis text share the concern to preserve the biblical account of the sequence in which creation came about but seek to express this in the light of the accounts to be found in contemporary cosmology and evolutionary theory. Some, for example, have suggested a gap between the original creation and a subsequent restorative creation after the fall of Satan and others have interpreted the biblical days as periods of time rather than 24 hour days.



Another approach, again, is to pay careful attention to the different kinds of literature represented in the Genesis texts (see Lucas, 2001). This means noting immediately the differences in style between Genesis 1–2.4a and Genesis 2.4b–3, and beginning to ask questions as to whether they are meant to be read as scientific accounts. On this basis, some will maintain a mode of direct inspiration for the author of Genesis, but a revelation that is much more concerned with theological questions than scientific ones. Others, however, will think of a mode of inspiration that works more indirectly, in and through people's natural capacities, enhancing them and bringing them to fulfilment. This would allow for the inspiration of scriptural writings as a process over time with texts coming to be revered, prayed, lived and even adapted before finding their final form.

Such an approach is, therefore, compatible with viewing different parts of the Genesis narratives as having different origins in different phases of the community's life, while allowing for a reworking of them into a final coherent narrative. It is also compatible with saying that whatever pre-scientific, pre-historical interests may also have been at work in the shaping of these stories, their primary purpose is not to provide a primitive scientific account of the world's origins but to articulate how Hebrew faith understood the meaning, purpose and order of things as God-given, God-held and God-directed. As Galileo would later express it, the point of the scriptures is not to tell us how the heavens go but how to get to heaven (see 1.12, 3.2.1).

Further, it is important to recognize that this is not some kind of new, modern approach without precedent in the history of the church. Early church fathers such as Gregory of Nyssa (c.335–95) and Augustine of Hippo (354–430) pointed out very clearly some of the problems that exist with taking the seven days of Genesis 1 literally, for example the fact that night and day are spoken of before the creation of sun and moon. We might also point to the differences between the first creation narrative in Genesis (Genesis 1:1–2:4a) and the second (Genesis 2:4b–2:25). Augustine here introduced an interesting and important principle to the effect that, with regards to matters of natural order that do not impinge on the heart of revelation, scriptural interpretation should bow to the findings of natural reason and adopt a symbolic interpretation of the text. Indeed, viewed in this way it is in fact strictly literal readings of scripture that are the modern novelty. Far from modern science, whether it be cosmology or evolution, forcing us to re-interpret the Genesis accounts, there is a real sense that modern science has allowed us to see the text as it was meant to be read by the author (Barton and Wilkinson, 2009).

When we bring this concern for the literary nature of scriptural writings to our reading of Genesis 1:1–2:4a, two important themes emerge.

### 2.3.1 The sovereignty of God in creation

This passage is generally assigned to the 'Priestly' strand within the Pentateuch, the first five books of the Hebrew Bible. Here the command of God is central. It displays a concern for order and worship evocative in turn of the good order of wellbeing marked out in the Torah, the Jewish law, and the reverencing of God as creator that lay at the heart of Temple liturgy and architecture. For example, the

structure and constant repetition within the passage is itself not unlike a hymn to the Creator, or even an act of worship. Some have even speculated that we are dealing here with a liturgical text that was used in an annual festival of creation celebrating, submitting to and invoking the blessed order of things that God intends.

There are certain possible parallels with the Babylonian *Enuma Elish* story – for example, both accounts start with either water or chaos at the beginning, followed by the creation of the firmament, of dry land, of the heavenly bodies and of people in that order. Beyond such structural similarities, however, the parallels cease and it is the differences that are significant. In direct contrast to the Babylonian account, creation is not depicted here as the result of a violent struggle between opposed forces, with the material world being made out of the slain corpse of a defeated deity. There may be in other parts of the Hebrew scriptures an allusion to creation involving the overcoming of water chaos (as we see in Ps.74.13–14) but there is no sense of there being an independent power that might stand in the way of the creator. As Walter Zimmerli writes:

Whatever mythical power may originally have resided in the individual elements, they have here become mere material for the creator to work with. At God's command, everything takes shape, starting with the foundations of the cosmos (the firmament of heaven, the earth, the sea, the stars). (Zimmerli, 1978:34)

This demythologizing of the cosmic elements is shown most clearly in the purely functional references to the lesser and greater lights in order to avoid the mythologically laden proper names 'sun' and 'moon'. In keeping, then, with the characteristic emphasis of the Hebrew scriptures on the distinction between creator and creature, the emphasis is placed in Genesis 1 upon the sovereignty and independence of God. In creating there is no struggle. Creation is a free, unconstrained act of God's Word, flowing from nothing other than the unopposed command of God that it should be so (cf. Psalm 33:9, 'He spoke and it took place; he commanded and it stood there'; Psalm 148:5, 'He commanded and they were created'; Isaiah 48:13; Genesis 6:22).

It is worth us pausing for a moment in order to consider what is going on here. Some scholars suggest that this passage reflects something of Israel's devastating experience of the Babylonian exile, during which Israelites would have been exposed to the Babylonian stories of creation. In this light, Genesis 1 can be viewed as a vehicle for asserting Israel's own distinctive belief in God's absolute power over chaos and, with this, in the fundamental goodness of what God creates and in God's ability and commitment to redeem the mess we make of things (Hasel, 1974:81–102). Viewed in this way, the key purpose of this account is the rekindling of confidence in the God of Israel as the creator and redeemer of all – and the celebration of this as lived truly within Torah and Temple. Indeed, something like this has been characteristic of the theology of creation in Jewish and Christian thought in many different contexts. That is, rather than being a purely academic discussion of beginnings, the theology of creation has been a way of exploring and reasserting the power and purposes of God not just for the present but also for the future.

Further, it is interesting to note that this key insight – of God freely creating the universe in an orderly way – has been recognized by some to be fundamental to the growth of science (see 1.11, 3.5.2). In particular, this notion of the fundamental ordering of the world by God led to the rise of the concepts of the laws of science (see Zilsel, 1942, Oakley, 1961) and engendered a positive attitude towards the study of nature in theologians otherwise as different as Thomas Aquinas and John Calvin.

### 2.3.2 The place of human beings in creation

While the main focus of Genesis 1:1–2:4a is on God the Creator, the passage also focuses significantly on human beings in relation to the Creator. The phrase referring to humankind being in the 'image and likeness' of God (Genesis 1:26–7) combines the concrete term *selem*, referring typically to a physical likeness, with the more abstract form *d'milit*, meaning 'similarity'. This combination has given rise to wide-ranging speculation in Jewish and Christian thought as to what might be intended. Image and likeness were contrasted in differences between 'natural qualities' such as reason and 'supernatural graces' such as spiritual qualities (Irenaeus c.130–c.200), or humanity after the fall and human nature after its perfection at final consummation (Origen c.185–c.254). Tertullian (c.160–c.220) suggested that the image of God was retained after sinning, while the lost likeness was restored through the renewing activity of the Spirit after conversion. However, there is little support for such exegetical distinctions. Image and likeness are used interchangeably (Gen. 5:3), and the majority of recent scholars see 'likeness' used here simply to qualify 'image' in order to stress that humans are not identical to God while being a real reflection of God. The meaning of 'image' itself has caused even more difficulty (see Clines, 1998). Different suggestions have included that God is physically embodied and human beings are physically the image of God; that the image denotes human reason; freedom; or our moral sense. Yet none of these interpretations does justice to the biblical material (see also 6.3.1 on the image of God).

Studies in the language and context of the ancient Near East lead to a different understanding of image as not so much a part of the human constitution as a pointer to the distinctive place of humanity within the created order. It is less about something we have or do and more about relationship (see Westermann, 1984:158). In contrast to the Babylonian account where the role of humans is simply one of serving the gods, humanity is viewed here, in distinction from the rest of creaturely reality, as enjoying a relationship of unique conscious intimacy with God. Or, perhaps better, humanity is that part of creation that is capable of being conscious of and responsive in its relationship to the Creator. In fact, within Christian theology Athanasius (c.296–373) spoke of the image of God as the capacity to relate to and partake in the life of God, while the twentieth-century theologian Emil Brunner (1889–1966) spoke of it as 'existence for love' (Brunner, 1952:57). Or as David Fergusson more recently put it, 'The image of God is thus to be understood not substantively in terms of the possession of an immortal soul, but relationally in terms of the role that human beings play before God and before the rest of creation' (Fergusson, 1998:14).

Furthermore, as this already implies, this relationship involves responsibility. In particular, there is a close connection in the text between being made in the image of God and God's command to humans to exercise dominion over the natural world (Genesis 1:26–8). This is to be understood as a call to share in the creative, sustaining dominion of God and so act as the visible representatives of God's benevolent care for creation. This, in turn, relates to the vexed question as to whether the dominion granted to human beings is objectionable on ecological grounds. The historian Lynn White Jr., speaking at the American Association for the Advancement of Science in 1967, argued that our ability to harness natural resources was marred by the deep-rooted assumption that, 'we are superior to nature, contemptuous of it, willing to use it for our slightest whim', and proceeded to claim pointedly that:

We shall continue to have a worsening ecological crisis until we reject the Christian axiom that nature has no reason for existence but to serve man.. Both our present science and our present technology are so tainted with orthodox Christian arrogance towards nature that no solution for our ecological crisis can be expected from them alone. (White, 1967:1203)<sup>2</sup>

Thus, Christianity, it is claimed, bears 'a huge burden of guilt' for the environmental crisis (see also 8.4).

If, however, the representative role of humans is taken seriously as suggested here, it implies that an authentic theology of creation in Judaeo-Christian perspective would promote attitudes not of aggressive exploitation but of responsible stewardship. That is, the unique role given to humans is better understood here, as Fergusson writes, 'in terms of a relationship to care for and to preserve the creation', rather than to dominate it. In this regard, it is striking that the Genesis 1 narrative reaches fulfillment not in the creation of Adam and Eve but in the sabbath day on which 'the whole creation glorifies its maker' (Fergusson, 1998:17). This provides further perspective on the distinctive role of humans within the created order as that of priests giving voice to creation's praise. That is, resting in, rejoicing in and living out of the sabbath praise of God is regarded here as the very pinnacle of what created reality and human reality in particular is called to. Viewed in this way, we humans are called not just to 'use' material reality for our own ends, but to hallow it, to reverence it as God's gift, to work for its flourishing and, in this manner, be viceroys of God's gracious generative sovereignty in God's good world.

Once again we encounter here a significant theological foundation for science (see Foster, 1934). Christians have understood this responsibility of stewardship as God's encouragement to develop science and technology for the good for all.<sup>3</sup> It goes against those views that see science as inherently evil. Rather than being banned from 'interfering with nature' we are actively encouraged to do good. In this regard, the theologian Philip Hefner coins the term 'created co-creators' to describe human beings made in the image of God (Hefner, 1993). God gives us responsibility and ability not only to care but also to innovate within the context

2 White's article is reprinted in Berry, R.J., 2000:31–42.

3 On stewardship see Berry, R.J., 2006.



of his creation and his will. Reijer Hooykaas comments that this biblical understanding of human beings in relation to both creation and Creator liberated us from 'the naturalistic bonds of Greek religiosity and philosophy and gave a religious sanction to the development of technology, that is, to the dominion of nature by human art' (1972:67).

In summary, then, it is authentic to the Christian theology of creation both to affirm technology and to question how it is used (see Chapters 13 and 14). Humanity's power, dominion and sovereignty are properly to be conceived not in terms of a controlling, destructive force and threat of violence, but in terms of a God-given and God-revealing generative capacity to create and to sustain life in wellbeing. With this, it is significant that in Christian tradition it is Jesus of Nazareth who is *the disclosure par excellence* of true divine power in a manner profoundly subversive of common expectations and, likewise, Jesus who is regarded as truly being in the 'image of God'. This is an insight that Karl Barth (1886–1968) emphasized perhaps more clearly than any other theologian in the modern period. For Barth the image of God is in turn reflected in man and woman created as the sign of hope of the coming Son of Man.

#### 2.4 From A to Ω: the theology of creation in the broader scriptural narrative

As the above suggests, it is a major mistake to view Christian theology of creation as built simply on the first chapters of the book of Genesis. Not only in terms of the image of God, but more broadly in terms of God's relationship with the universe, Jewish and Christian thinkers have been influenced by many other passages in the Hebrew Scriptures and the New Testament. Genesis needs to be seen alongside passages such as Proverbs 8:22–36 and Job 38:1–42:17 which stress the wisdom of God in creation, passages which celebrate the glory and majesty of God (Psalm 8, 19, 148, Isaiah 40:9–31), and passages which look forward to new creation (Isaiah 65:17–25, Romans 8:18–27, 2 Peter 3:3–13, Revelation 21:1–8) (see Wilkinson, 2002). In this latter regard, of course, central to the New Testament is the role of Christ in creation (John 1:1–18, Colossians 1:15–20, Hebrews 1:1–14), regarded as the word or wisdom of God through whom all was spoken and in whom all are destined to find their authentic voice. In all of these passages, it is clear that creation is not the subject of pure intellectual speculation, but is used to convey a message about God and God's relationship with the world. Here cosmology is rarely of interest for its own sake.

While the interest of the modern world may be on how the theology of creation relates to scientific cosmology, the biblical writers were concerned with something very different – with the meaning of things in God's providential plan. As has been noted, Karl Barth reflected this very clearly in his own theological thinking about creation. He expressed it in terms of the covenant being the 'internal basis of creation' (its inner rationale) and of creation being the 'external basis of the covenant' (the context within which covenant could be initiated and brought to consummation). By so doing, he attempted to reorientate the discussion away from creation and cosmology to God's relationship with creation and humanity in

particular. For Barth it is quite clear, God creates not out of any necessity on God's behalf but in order to draw creation into covenant in Christ. As such, for Barth, God's self-disclosure in Jesus of Nazareth is, somewhat controversially essential even to understanding aright even what it means to view God as creator. In his own words:

I believe in Jesus Christ, God's Son our Lord, in order to perceive and to understand that God the Almighty, the Father, is Creator of heaven and earth. If I did not believe the former, I could not perceive and understand the latter. (Barth, 1958:29)

As is explored further in Chapter 3, this conviction underpinned Barth's hostility to any idea of natural theology which starts outside of revelation and is not a result of grace. For many other theologians Barth pushes his argument too far at this point in denying that humans have the ability to see something of the Creator in creation itself and in appearing not to value the physical creation as anything other than backdrop or context for the covenant to unfold. Even within the terms of Barth's theological vision, it might be argued that if creation really is intrinsically Christ-shaped and Christ-orientated, then should it not be expected that something at least of God's truth in Christ can be known, albeit in partial and confused form, by looking truly at the created order? This being said, it equally needs to be acknowledged that Barth's emphasis on the relationship between Christ and creation reflects well a core conviction of the New Testament writings.

Take, for example, the depiction of Christ at the heart of creation in Colossians 1:15–20. Here we find applied to Jesus everything that could be said of the figure of 'wisdom' in creation (Proverbs 8:22) (Burney, 1925–1926). The implication is that at the heart of creation is not simply a divine attribute but a divine personality. Christ is proclaimed here as 'the first born over all creation' (v.15), signifying supreme rank or that he is prior in importance. Nor is Christ simply a part of the created order, 'for by him all things were created' (v.16). Creation, in this view, is the activity of God the Father in the Son: not only do all things have their origin in Christ, 'in him all things hold together' (v.17). The verb is in the perfect tense indicating that 'everything' has held together in him and continues to do so, that through him the world is sustained and prevented from falling into chaos. The source of the universe's unity, order and consistency is to be found, Colossians is suggesting, in the continuing work of God in Christ.

Far, then, from science and technology being necessarily 'unChristian', or in conflict with Christian faith, they are properly affirmed by Christian theology given that the whole of the created order is thought of as owing its origin, purpose and continued existence to Christ. Indeed, in this way of thinking, the exploration or use of the order in the Universe is only possible because of Christ.

Further Colossians 1:15–20 emphasizes that the God of creation is also the God of new creation by placing these ideas in parallel. Contrary to the deist-like assumption that God's work stops at the end of the first chapter of Genesis, Christian theology views God as both creator and redeemer. This reflects and extends the Jewish conviction that Israel's God, the one who delivered them from Egypt, is also the creator of the whole universe (Isaiah 40:12–31). The parallel here

is expressed in the phrase 'first born'. It is used as 'over all creation' (v.15) and then 'from the dead' (v.18). Christ is not only the beginning of creation, he is also the beginning of the new creation, as demonstrated for the writer of Colossians by his resurrection. One of the key aspects of this new creation is reconciliation, not just of sinful men and women but of 'all things'. The canvas is of cosmic proportions and has the sense of bringing the entire universe into a new order and harmony. Indeed, within other passages of the New Testament, God's purposes are seen to go beyond this universe into a 'new heaven and new earth' (Revelation 21).

Thus, a Christian theology of creation maintains that this creation really is good, while also looking forward in the purposes of God to a new creation. This hope of a new creation is not of God completely starting again, or the hope for some kind of disembodied immaterial state, but the hope for the transfiguring fulfillment of this present creation into all that it was called into being to be. Given this combination of identity and transformation, the present created order is not to be written off as evil or unimportant, but is, rather, to be cared for, respected, enjoyed and delighted in.

## 2.5 The development of the theology of creation within Christian tradition

In turn, neither did Christian understanding of creation cease with the biblical writers. As Christian faith negotiated its encounter with different historical contexts, so theologians began to apply, reappraise and build upon what they had received from the biblical writers. In this process, a number of key areas emerged.

### 2.5.1 *Creatio ex nihilo*

What is the relationship between God and creation? In what sense does creation depend upon God? Aristotle (384–322 BC) had argued for the eternity of the world (*Physics*, I, 9; *On the Heavens*, I, 3). In contrast, as we have seen, the biblical material stresses the universe's dependence on God for its origin and its continued existence. This, however, leaves open the question as to whether God simply shaped the universe from pre-existing matter, somewhat like an architect imposing order on matter that was ready to hand. This view, reflected in Plato's *Timaeus*, also appeared in Gnostic writers and was, in turn, used for apologetic purposes by Christian apologists such as Justin Martyr who was executed in 165.

As has been noted, Genesis 1 polemically affirmed that God has no competitors to overcome in creation. We find a clear hint at the notion of creation out of nothing in Jewish thought in 2 Maccabees 7:28, 'I beg you, my child, to look at the heaven and the earth and see everything that is in them, and recognize that God did not make them out of things that existed.' But does Genesis 1 itself reflect such an understanding or does it see God as working with pre-existing matter? The opening image of the primordial water over which God's spirit hovered and into which God's word was spoken would seem to suggest the second option. Some have consequently claimed that the notion of 'creation out of nothing' is at

least ambiguous in Genesis and only came to clear articulation as Christian faith encountered and responded to the questions and challenges of Greek philosophy and gnostic thought (May, 1994, Young, 1991).<sup>4</sup>

While recognizing, however, that the writer of Genesis 1 was much more concerned to proclaim the divinely ordained order of things than to speculate on their absolute origin, it is important to be clear that for the biblical writers there was no significant dualism of God and matter (cf. Westermann, 1984:109). On the contrary, the emergence of the doctrine of *creatio ex nihilo* in Christian writers of the second and third centuries such as Theophilus of Antioch, Irenaeus and Tertullian was driven precisely by the concern to maintain the biblical affirmations of the basic goodness of the world and of God's utterly unopposed freedom in creating. As Irenaeus expressed it, countering gnostic dualism in *Against the Heresies*, 'God, in the exercise of his will and pleasure, formed all things ... out of what did not previously exist' (Irenaeus, 1967:II.x.2, p370). In turn, writing against the Manicheans, Augustine later clarified that this meant that God created out of nothing at all (Augustine, 1961:XII.7, p284). In T.F. Torrance's terms:

The creation of the universe out of nothing does not mean the creation of the universe out of something that is nothing, but out of nothing at all. It is not created out of anything – it came into being through the absolute fiat of God's word. (Torrance, 1996:207)

The profoundly scriptural point at issue here is that all that exists has its source in nothing other than the limitless possibilities for life that God is and that, as such, there is nothing that lies utterly beyond the capacity of God's creative-transforming action. Consequently, as Osborn maintained, while the actual words 'creation out of nothing' may not be found in the Bible, the concept itself resonates with the deep assertions to be found there (cf. Osborn, E., 2001:65–8). Or as Mark Worthing puts it, the doctrine is 'biblical in its seminal form, if not indeed in its full expression' (1996:76).

Torrance further argues, significantly, that this doctrine and the associated rejection of gnosticism was important for the development of the natural sciences on account of the affirmation of the fundamental goodness of creation it represents. Creation is distinct *from* God but dependent for its existence *on* God. As such, creation is both to be valued, rather than to be escaped, and free to be investigated rather than worshipped. Along with this, God was not constrained in creating by the limitations of pre-existing matter but could create freely. Thus, to fully understand the God-given order of the universe it was necessary to observe it – the basic principle of empirical science.

This in turn prompts the question as to whether the doctrine of *creatio ex nihilo* favours particular scientific models of the origin of the universe? For example, does it favour the temporal beginning commonly associated with Big Bang models over against the eternal universe of the steady-state model proposed by Hoyle, Bondi and Gold? In this regard, R.J. Russell suggests that the notion of a historical

4 Others have contested creation out of nothing on theological grounds (e.g. Keller, 2003), or as problematic for a contemporary ecotheology (Bauman, 2009)



origination of the universe provides an important corroborative meaning for the logically prior notion of the ontological origination of the universe – the belief that all that exists depends on God regardless of whether or not it had a beginning – although it is not essential to it (Russell, 1993:293–329). The relationship between historical and ontological origin lies in the concept of finitude. The fact that the universe has a finite history is not trivial in the sense that a temporal origination of the universe can provide confirming but not conclusive or essential evidence for ontological origination. As Aquinas also recognized, at the core of the doctrine of *creatio ex nihilo* is the principle of ontological dependence, and the discovery of an actual temporal beginning to the universe would serve only as a gloss on this (Russell, R.J., 1996; cf. Aquinas, 1967:1a.46.2, p81). However, if *creatio ex nihilo* was viewed as a hypothesis to understand the Universe then a temporal beginning could be used as confirming evidence alongside other things.

### 2.5.2 Aquinas, causes and design

Thomas Aquinas (c.1225–1274) moved the theology of creation forward in a number of key ways, from the use of reflection on creation to demonstrate the reasonableness of belief in the existence of God, to the identification of natural law and its implication for human societies.

In his 'five ways' he famously attempted to demonstrate the existence of the transcendent cause of the world, 'to which everyone gives the name "God"' (Aquinas, 1964b:1a.2.3, pp13–17). This approach was based on the premise that by examining known features of the world (e.g. causal sequences or the appearance of order), it is possible to draw universal conclusions about the relation of world and Creator. Relying on Aristotelian science, he argued that the order observable in nature is due to universal and objectively real forms that determine the nature of things. Thus, one can arrive at universally accessible truths about nature through a method which is strictly logical and argumentative, rather than depending explicitly on biblical revelation. This being said, it is important to recognize that, as a Dominican preacher, reflection on Scripture and the desire to give cogent expression to the world it evokes is what guided Aquinas throughout all of his theological work (see Healy, 2003). Indeed, even his high regard for human reason was guided by the conviction that, as created, the world could be assumed to be impressed with the mark of its Creator, an idea that received formal articulation in his 'analogy of being'.

While the relationships and differences between the 'five ways' are still debated, in broad outline we may note that where the first three ways argue to the necessary cause of the existence of the world and are varieties of the so-called 'cosmological argument', the final two lay more stress on the order and purpose in the world and are variations of the so-called 'design argument' or 'teleological argument'.

In the first way, Aquinas focuses on the fact that the world is in the process of change. This basic dynamism must, as with all change he reasoned, have a cause. In turn, this requires a single fundamental cause, or 'first mover', as an infinite chain of movers is, he claimed, impossible or, perhaps better, less reasonable and satisfying as an explanation. Whatever this fundamental cause is, however it is to be understood,

it is, Aquinas claimed, what people mean when they speak of God. Similarly, in the second way Aquinas observed a network of cause-effect relations, or 'efficient causes' in his Aristotelian terminology, each the consequence of preceding causes. As before, he argues there must be something on which this entire causal order in turn depends for its existence. For Aquinas, God is this first cause who makes things to be and sets them in motion and which motion in turn makes other things happen. This being said, it is important to note again that for Aquinas the strict idea of a temporal beginning of creation – as distinct from its eternal dependence on God as first cause – cannot be derived on the basis of human reason, but must, rather, come from revelation. In turn, the third way differentiates between necessary and contingent beings. Human beings, for example, are contingent beings which come into existence and which can cease to exist. But contingent beings, Aquinas argues, can only come into existence if they are caused so to do by an original cause of being whose existence is there as a matter of necessity. As before, Aquinas claims that this idea of a necessary being is what people refer to when speaking of God.

The fourth way observes values in human beings such as goodness, beauty and truth. Where do such things come from, Aquinas asks. In reply he argues that the existence of such values implies that something must exist that is the most good, beautiful and true and that brings these human values into existence. That something is in fact God who is the perfect and original cause of these values. Finally, the fifth way sees intelligent design in the world, that is, things seem to be adapted with certain purposes in mind. The source of this design or natural ordering must, Aquinas reasons, in turn be some intelligent being – God – who works out God's purposes in creation.

Despite the authority that eventually came to be accorded to Aquinas' work, he was by no means without his critics in the Middle Ages, in particular Duns Scotus (1255/6–1308) and William of Ockham (1280/5–1349). For such thinkers, it was not clear that a sequence of cause and effect had to stop at a first cause. Again, why should the arguments lead inevitably to just one god rather than a number of gods. Ockham even suggested that Aquinas' arguments do not rule out that God as first cause may have started things off, but then ceased to exist.

Such disputes have, of course, continued into modern times. Most famously, Immanuel Kant (1724–1804) argued that all arguments for the existence of God ultimately depend on the truth of the failed ontological argument that Aquinas himself had rejected – the argument, that is, associated with Anselm of Canterbury (1033–1109) to the effect that the definition of God as necessary being *logically requires* the actual existence of God.

More recently, the Big Bang model of the Universe has encouraged some to reconsider the cosmological argument. For example, encouraged by the work of Roman Catholic cosmologists such as Whitaker, Pope Pius XII in 1951 stated on the basis of the Big Bang model:

Thus with that concreteness which is characteristic of physical proofs, it [science] has confirmed the contingency of the universe and also the well founded deduction as to the epoch [some five billion years ago] when the cosmos came forth from the hands of the Creator. Hence, creation took place in time. Therefore, there is a Creator. (quoted in Jaki, 1980:19)

Some distinguish here the cosmological argument used by Aquinas, from a temporal form of the argument, the so-called 'kalam argument', which derives from an Arabic school of philosophy in the early Middle Ages (see Fergusson, 1998:36–9). This argument, which clearly extends cause and effect back in time, arguing for a temporal first cause to the Big Bang, is, however, faced with a number of significant objections. First, it is not clear in terms of the nature of time whether cause and effect observed within the universe can be extended to the whole universe. Second, the spectre of what Charles Coulson called 'the god of the gaps' (Coulson, 1958:41) is always in the background of such an argument. Coulson cautioned that theologians should be cautious that if a gap exists in science, then it is dangerous to insert God into the gap. Thus, the publication of Stephen Hawking's *The Grand Design* (Hawking and Mlodinow, 2010) was greeted by newspaper headlines implying that science has shown that God does not exist. In fact, Hawking was continuing to challenge a god of the gaps who was needed to light the blue touch paper of the Big Bang. The danger is that tomorrow's science may fill in today's gaps, with the result that God is pushed out into obscurity (see 1.13, 10.3).

Likewise, as the next chapter explores more fully, the design argument became very popular following the scientific revolution. Newton's universal law of gravitation and laws of motion suggested a mechanistic universe, carefully crafted with a purpose in mind. Careful observation of the biological world compounded this sense of design in the natural world as came to expression most famously in the clock analogy of William Paley (1743–1805). Yet its weaknesses were exposed philosophically a) by David Hume (1711–1776) who pointed to the degree of disorder or natural evil in the world as a significant countervailing fact and b) by Charles Darwin when he provided an alternative explanation of the apparent 'design' of the natural world in his theory of evolution by natural selection (see 6.6, 6.7). In the light of this, it is interesting that a significant element of the science–religion dialogue in the past few decades has been a revival of the design argument, particularly in the area of cosmology with the observation of anthropic balances in the laws and circumstance of the universe essential to intelligent life. Whatever might be made of such arguments viewed philosophically, it is notable in theological terms that when dislocated from Aquinas' prior concern to witness to revelation, they have often served to promote a merely deistic view of God. In fact, the rise of deism in the late seventeenth century was itself intertwined with the development of such rational arguments for the existence of God (see Buckley, 1987). Within such a perspective, the Creator is viewed as remote in the sense of having created the mechanism of the universe but then having nothing more to do with it.

Aquinas' own view, of course, was far from deism. He highlights the attempt to conceive the way in which God was thought to act in creating that had become widespread in the Christian community from the early centuries on under the influence of neo-Platonic philosophy. The central metaphor here is that of 'emanation'; of all that exists as coming forth from the being of God.<sup>5</sup> This idea had already been used by early Christian writers with reference to the image of light

<sup>5</sup> Aquinas 1964c:1a.13.11, 91–3 (p.93), also 1967:1a.45.3, 35–9 (p.37) & 1a.45.4, 39–43 (p.41). For commentary on this and what follows, see Burrell, 2004:27–44.

or heat emanating from the Sun. It suggests a close connection between creation and Creator, such that creation is thought of as really participating in the being of the Creator.<sup>6</sup> With this, it suggests that creation in all its diverse particularity manifests something of the inexhaustible abundance of God's being (Aquinas, 1967:1a.47.1, 95) and, therefore, that by inspecting creation it should be possible to discern something of the truth of God.

Unless qualified, however, the metaphor of emanation could also imply a lack of personal intention by God in creation, as though creation simply flowed forth from God with an unwilling inevitability. In this regard, it is notable that Aquinas does indeed significantly qualify his use of the metaphor such that he thinks not in terms of 'mere overflow' but of a freely willed and gracious (i.e. unowed) overflow of the infinite richness of God's being in order to draw something other than God into existence to share in this richness of being (Aquinas, 1967:1a.46.1, 69). Viewed in this way, God literally has no need of creation. In keeping with God's nature as love and the infinite richness of Trinitarian God's being in which there is no lack, creation is for creation's good, not God's (Aquinas, 1965:1a.32.1, 109). Further, far from disabling God from the possibility of any real concern for creation, as some have charged, this lack of need and self-interest means that God is free to be genuinely interested in creation for its own sake (Williams, 2000:63–78). God's will, it follows, can always be trusted as being genuinely in our best interests, rather than feared as the demands of an ultimately self-serving despot.

Alongside an emphasis on the gracious, willed character of the creative overflow of God's being, Aquinas further qualifies the metaphor of emanation by using it in conjunction with other metaphors such as that of God as artisan (Aquinas, 1964d:1a.14.8, 31). This is a much more personal metaphor, stressing the creative initiative of the Creator and the resulting beauty of creation. However, if the notion of emanation suffers from the potential suggestion of a subpersonal mode of creation, artisan imagery – along with a third widespread metaphor, that of construction – can tend, if unqualified, to suggest again the idea of creation from pre-existing matter. More positively, however, both the artisan image and the image of construction give clear emphasis to the intentional order of creation that is fundamental alike to the biblical witness and to Aquinas' Aristotelian-influenced view of the natural order.

For Aquinas, the ongoing relation between God and the created order is viewed both in terms of God as first cause, holding in being a hierarchically structured set of secondary causes and God as final cause, or *telos*, towards which all created secondary causes are orientated as their fulfillment which they strive to attain. In one sense, the entire created order and all that happens is within the will, or *fiat* of God. More particularly, however, the will of God is actualized to the degree that secondary causes, brought into being and held in being by God, act in accordance with their natural orientation to their supernatural end under the guidance of the Holy Spirit. This represents Aquinas' understanding of providence (see 10.9(iii) (a)). In this way God sustains, governs and sustains the world. Without God's

<sup>6</sup> See Aquinas, 1967:1a.44.1, 5–9 & 1a.45.5, 43–51 (p.47), also 1964b:1a.3.4, 31–5 (p.33).



sustaining activity everything would fall into nothingness. Without God's gracious inspiring-transformative activity nothing would reach its end.

Previously, Augustine had asserted that creation is an instantaneous act, in that everything appears the moment God brings the universe into being. However, creation continues to be completely dependent on God for its existence while being given the opportunity to pursue with a degree of independence the potential that God has granted it. For Augustine time was part of creation with the consequence, he concluded, that the universe was created not *in* time but *with* time. With such an understanding he viewed the Genesis account not as scientific history but as a revelation fitted to the limited powers of its recipients (see van Till, 1996:30). In a similar way, Aquinas saw creation as both depending on God for its existence at every moment, but as also having been granted its own integrity to unfold according to its God-given nature through the action of secondary causes striving, under the inspiring-transforming draw of God's Spirit, to achieve their desired end and fulfillment in God.

With this, along with his arguments for the existence of God, Aquinas developed the concept that nature had purposes from God's design. Not only did they provide evidence of God, they also gave a natural revelation of the purposes of creation. Thus God's eternal law is revealed in divine law through the scriptures and in natural law, reflected in the nature of the creation itself. If every part of creation naturally tends to seek its natural end or good, in the case of human beings this takes particular form in the search to know God and to build an ordered society reflecting the wellbeing of God's good order. In building such a society, in addition to the biblical commands, natural law means that human beings can identify universal and eternal moral standards. Human law is therefore built on these moral standards, and indeed the natural law provides a framework for laws in specific situations. The strength of this is that it gives the possibility of agreement on international law across different countries and cultures as is evidenced in the role it played in developing concepts such as just war theory.

### 2.5.3 The Reformation and the growth of science

It should be clear that, with the theology of creation within the Judaeo-Christian tradition and the development of that tradition by thinkers such as Aquinas, the foundations for modern science were in place. This is evidenced, for example, in the widespread and innovative use of technology within monastic culture (see 14.4). The role of reason and search for the laws of nature built upon the origins of science from the Greeks with considerable contributions from Chinese and Muslim scholars. Combined with this was the necessary regard for the world as both good – and, therefore, to be appropriately valued and taken seriously – and contingent, or dependent on God for its order which consequently requires investigation rather than mere theorizing.

In turn, the Reformation seems to have had its own contribution to make. Certainly, in the seventeenth century it was the Protestant areas of Europe that dominated the emerging scientific revolution (Gingerich, 1982). Some have suggested that it was the criticism of scholasticism's Aristotelian-based science and

the putting of emphasis on the direct observation of nature that fed through into the rapid growth of science. Others argue that the Reformation created a climate of openness to new ideas. Relevant also, particularly within the realm of technology, is Weber's famous thesis as to the relationship between the rise of capitalism and the Protestant work ethic. The history is of course complex and it is both significant and somewhat disheartening, to note that claims for the respective contributions of medieval and reformation thought to the rise of science all too frequently follow strictly confessional lines of interpretation.<sup>7</sup> On surer ground, whatever might be said about the rise of science, it is uncontroversially the case that the theology of creation was affirmed, critiqued and built upon in Reformed theology.

Calvin (1509–1564), for example, reacted trenchantly against any understanding of God on the basis of the world utterly independent of God's revelation. At the same time, he also reacted against the monastic tendency to renounce the world. He wanted to affirm the world, and did so by stressing both the world as created good and the world as fallen and in need of redemption. Thus, while Calvin allowed for the possibility of some knowledge of God in creation, describing it even as a theatre or mirror for displaying knowledge of God, alongside this was the qualification that such a natural knowledge of God is imperfect and confused because of sin, even to the point of contradiction – all of which, it should be noted, Aquinas also maintained, albeit in lower register. Therefore Calvin is positive about reason, logic and experience, while stressing that saving knowledge of God has to be through Christ and the regenerating work of the Holy Spirit. For Calvin, Christ is the mediator of creation, at the dual levels of both general and special providence:

Calvin makes room in his doctrine of creation for: the Logos who orders existence and its intelligibility, and the Word incarnate through whom alone life reaches its goal; the providence which preserves all life, even after the perfidy of human sin; and the providence which especially guards the community of the elect; a humanity which bears God's image as qualities of excellence engraved by a loving hand, and a humanity which can truly mirror God's excellence and goodness only as remade in the image of Christ. (Wyatt, 1996:81)

In clearer contrast to Aquinas, however, Calvin plays down the role of secondary causes in natural processes and instead emphasizes God's immediate primary activity in creation. He argued that the immediate agency of God was to be seen not just in sustaining but in every act in the universe. For example, in the Heidelberg Catechism of 1563 the traditional threefold distinction of God's providential work into conservation, *concursus* and *gubernatio* was conflated into a view that all things come directly from the hand of God the Father. Indeed, this is also the case for new creation. The effect of sin on creation means that it has to wait for

<sup>7</sup> For example, where Reijer Hooykaas strongly argues for the distinctive contribution of his own Reformed tradition, the Catholic Stanley Jaki resolutely maintains the essential role of medieval theology in laying the foundations for modern science, see Jaki (1978) & Hooykaas (1972).

its future restoration by the redemptive activity of Christ, the saviour as well as the creator (McGrath, 2001:174–5).

Luther (1483–1546) for his part, like Calvin, affirmed the reality and goodness of creation. But like Aquinas also, he was much more impressed by God's sustaining of the universe rather than by the initial act of creation, remarking that many people have the energy to start something but few to continue it. He commented that God had 'not created the world like a carpenter builds a house and then leaves it ... but he stays with it and sustains it the way he has made it, otherwise it would not remain' (Luther, 1983: VIII.25). God had ordered everything in the world from nature to humanity and although, as Aquinas had maintained, patterns for ideal relationships could be found in natural law, this did not have compelling power for us because of sin. Perhaps most distinctively, Luther interpreted the Genesis texts in a strongly Trinitarian fashion (1958:9), and, indeed, more generally there does seem to be in both Luther and Calvin a move away from the language of derived causality to one of divine personal action, understood in terms of Trinitarian mediation (see Gunton, 1998:153).

Again, Luther was clearly open to the authentic scientific advances of his age, including the value of engineering, medicine and astronomy. He accepted the claims of the astronomers who suggested that the moon was the smallest and closest of the stars. As with Augustine, he likewise interpreted the opening chapters of Genesis as God accommodating his revelation to the limited understanding of the readers (see Spitz, 1971:583–4). In the light of this, it is surprising to see Luther often portrayed as a fierce opponent of Copernicus (Kearny, 1971:103, Butterfield, 1965:68, Kuhn, 1957:196). This is in large part based on an offhand remark that he is alleged to have made about Copernicus in 1539. In Luther's defence, we need to note both that disputes exist about what was actually said on the occasion in question and that, in its historical context, opposition to Copernicus represented less an opposition to science *per se* and more the prevailing dominance of Aristotelian thought combined with the lack of evidence for the new theory (Burt, 1954:38, Kobe, 1998:190–6).

Overall, the Reformation influence on the development of the theology of creation was generally very positive for science. This was strengthened by an understanding of the stewardship responsibility given to human beings. Luther and Calvin were adamant that work outside the church was as much a matter of Christian vocation as was that of the religious orders. As a consequence, scientific work was seen as serving God, revealing the glory of God in creation and using the scientific insights for the benefit of all. (Barbour, 1966:48–9). For example, Kepler commented that he had turned away from a vocation as a theologian and that 'through my effort God is being celebrated in astronomy' (quoted in Gingerich, 1993:307).

#### 2.5.4 The modern period

From the nineteenth century to the present day there have been a whole range of important theological insights, movements and thinkers who have further shaped the theology of creation within the Christian tradition. For example, Friedrich

Schleiermacher (1768–1834) – oft referred to as the 'Father of modern theology' – tended to read the doctrines of creation and conservation together, with the result that the emphasis shifted from the originating to the sustaining action of God. He conceived the relationship between creation and God as one of absolute dependence, but in such a fashion as has been judged by some to diminish the role of the Son and the Spirit in the mediation of creation. In reaction to this, we have already mentioned Barth's Christocentric understanding of creation. While it is beyond the scope of this chapter to give a detailed account of the many components of this development, it will be helpful briefly to sketch a number of significant questions in modern theology which are relevant to the dialogue of science and religion. Each of them will be picked up in greater detail in the following chapters.

*First, how important is science to a theology of creation?* Barth has not been the only theologian with an ambivalent attitude to science. Some have reacted to the controversies surrounding evolution by trying to distance any theology of creation from scientific insights. Nevertheless, in the modern period a number of theologians have attempted to build bridges with science. Moltmann continues to bemoan the lack of dialogue on this subject between scientists and theologians and pleads for a new 'natural theology' in which scientific findings tell us something about God, and theological insights tell us something about nature (Moltmann, 2003). In a similar way, Pannenberg argues that a theology of creation must be influenced by the insights of natural science or it will become irrelevant. Equally, however, he maintains that unless God is properly considered, a scientific theory cannot fully comprehend the world it seeks to explain, as the world is only properly viewed when understood as creation rather than a purely natural phenomenon. He wants to construct a 'theology of nature', preferring this term rather than 'creation' which he argues speaks to many people simply about the origins of things rather than God's continued sustaining of the entire creative process (Pannenberg, 1989, 1993).

Such concern to think the disciplines of science and theology through together comes to particular expression in the theology of Thomas Torrance (e.g. Torrance, 1969; 1980; 1985). Where Pannenberg reacts against what he perceives as Barth's revelatory positivism, Torrance's work has an explicitly Barthian feel to it. Using insights from special and general relativity, he argues that theology should not be trapped in the analytical and dualist ways of thinking of the Newtonian worldview. Just as science attends to the reality of the material order disclosed through empirical method and hypothesis, so theology as the science of God attends to the reality of God disclosed in Christ and the Holy Spirit. As with Barth, so for Torrance the reality of the Creator God is known as we are reconciled to God in Christ. In this way, while recognizing the differences and similarities between the methods of science and theology, Torrance saw a new synthesis emerging in which science could be situated in its properly theological context. Following Torrance, Alister McGrath has been engaged on pursuing a closely related project (see McGrath, 2004 for a summary).

Alongside these theologians, there has been a significant amount of work done in the theology of creation by scientist-theologians, who trained and worked as professional scientists before subsequently moving to theological work, most notably



John Polkinghorne, Ian Barbour and Arthur Peacocke.<sup>8</sup> Typical of their approach has been the concern to look at the various specific issues that modern science has raised, whether cosmology, evolution or complex systems, and then to ask what these insights might mean for the theology of creation (see e.g. Barbour, 2000, Peacocke, 2001, Polkinghorne and Oord 2010).

*Second, how does God act in the world?* Since the time of Aquinas, the action of God in special and general providence has been the subject of much theological debate. Dominating the concerns of some have been the difficulties posed to any notion of God acting in the world by the now outdated Newtonian worldview (so Bultmann, 1983). Others, seeking to respond to the problem of evil have viewed God as only acting in the creating and sustaining of the world (so Wiles, 1986). Others again have built on the philosophy of Whitehead to produce a process view of God within which God is thought of as working through persuasion rather than coercion (Cobb and Griffin, 1976). While Gilkey could complain that providence had been demoted to the level of a footnote in twentieth century theology (Gilkey, 1963), the last 40 years have seen a growth of interest. This goes beyond the simple use of the language of providence in situations of crisis that continues to play a significant role in Christian spirituality. Beyond the level of Christian piety and ordinary theology there has been a serious attempt to understand the nature of providence in any theology of creation and to bring it into dialogue with insights from the world of science. Leading the way in this field has been a series of publications sponsored in part by the Vatican (Russell, R.J. *et al.*, 1993, 1995, 1998, 1999, 2001, 2009 – for a full discussion see Chapter 10).

*Third, what is God's relationship to time?* This issue of God's knowledge of our future and God's relationship to time has provoked controversy among theologians. Some defend God's omniscience and foreknowledge in a classical sense (Kvanvig, 1986; Plantinga, 1987; Craig, 1991). Others argue that God cannot be totally separated from time, if he is in some form of personal relationship with creatures and the universe which takes petitionary prayer and human responsibility seriously (see Pike, 1970, Davis, 1983; Brümmer, 1984; Padgett, 1992). Following the model of the dipolar God of process theology (see 8.2), some theologians have suggested that God has both eternal and temporal poles to his nature. Others use the Trinity as a way of maintaining both his eternal and temporal aspects. Yet others speculate that God is timeless without creation and temporal subsequent to it (Ward, 1996a; Wolterstorf, 2000).

Indeed, within mainstream theology since the work of Moltmann and Vanstone, it has been fashionable to view God's creative love as being accompanied by vulnerability (Vanstone, 1977; Moltmann, 1985). Within such contemporary theologies of kenosis,<sup>9</sup> God is thought of as limiting Godself and as giving to humans and the universe a degree of freedom to explore potentiality. Thus, God creates through an

<sup>8</sup> For a comparative study see Polkinghorne, 1996a.

<sup>9</sup> The mainspring of Christian reflection on suffering comes from the suffering of Christ, and in particular the concept that Jesus 'emptied himself, taking the form of a servant' (Phil. 2.7). The word for 'self-emptied', *ekenōsen*, has given theology the term 'kenosis'. For a range of application of this concept to the theology of creation see Polkinghorne, 2001. For further discussion see 8.5.6, 8.6.2.

evolutionary process that includes chance to give human beings the possibility of development but with the consequent risk of suffering (so Ward, 1996a, Murphy and Ellis, 1996). While often accepted without much criticism in European theology, this notion of God as giving openness to the future has provoked major controversy in US evangelical circles. For example, Pinnock's and Sanders' arguments for it are situated against a bitter backlash from more conservative theologians (Sanders, 1998, Pinnock, 2001, Bray, 1998, Ware, 2000 – for further discussion see Chapter 8).

*Fourth, what does the theology of creation mean for our care of the environment?* Subsequent to Lynn White's charge that Christian theology of creation is complicit in the environmental crisis, Christian theology has responded to his call for a 'refocused Christianity', and has looked again at its theology of creation in order to make ecology an integrating concern across the theological spectrum from feminist to evangelical theology (see Chapter 8). Alongside this, there has been a significant body of work specifically aimed at a theology of animals, from their place in a theology of creation to the ethics of their care (e.g. Linzey, 1994; Deane-Drummond and Clough 2009, Clough 2011).

*Fifth, how does the theology of creation relate to a theology of new creation?* The eschatological concern to ask what it means to live in the present in the light of God's purposes for the future consummation of things has played centre stage in much recent contemporary theology due, in no small part, to the work of Jürgen Moltmann (see Moltmann 1967; 1996). While much of this thinking has concentrated on the future of human beings or even the Earth in terms of the environmental crisis, some theologians have begun to ask what it means for creation as a whole (see Polkinghorne, 2002; Polkinghorne & Welker, 2000; Wilkinson, 2010, also 10.19). Theology of creation needs, it is maintained, to take account of the end as well as the beginning of the story? For Hardy, for example, creation is what both keeps the universe from ending, and 'brings it to its end' (Hardy, 1996:157). That is, there is an important relationship, we might say, between this creation and new creation, and each needs to be seen in the light of the other.

*Sixth, what is the importance of the Trinity for the theology of creation?* As has been noted, this is a tradition from the early church fathers through Aquinas, Luther, Calvin and Barth and has found varying contemporary re-emphasis in contemporary theologians such as Gunton, Lash, Pannenberg and Zizioulas.<sup>10</sup> The Nicene Creed declares, 'We believe in one God, the Father Almighty, maker of heaven and earth ... and in one Lord Jesus Christ, the only begotten Son of God, ... of one Being with the Father, through whom all things were made ... and in the Holy Spirit, the Lord and Giver of life.' The Father creates not in isolation but through the Son in the Spirit.

Within this purview, creation is thought of as flowing from and reflecting something of the Trinitarian communion of God in which it exists. God creates not out of any need to establish communion, but rather from the freely willed desire to share this life with that which is not God. This has two significant implications. First, creation in Trinitarian perspective is radically contingent rather than necessary. Second, the deep order of things reflects God's own dynamic good

<sup>10</sup> See e.g. Gunton, 1998, Lash, 1992, Pannenberg, 1991–94, Zizioulas, 1989.

order, manifest, in Christian understanding, in the person of Jesus of Nazareth and promoted in the created order through the inspiring-transforming action of the Holy Spirit.

*Seventh, what is the significance of human beings in creation?* This is a crucial question for the theology of creation.<sup>11</sup> Christian theology has attempted at times to answer this question in terms of dualism. Augustine saw soul and body, after the fashion of Plato, as two separate substances held together in an uneasy union. Aquinas, by contrast, reflected a more holistic vision inspired by Aristotle. Here soul is seen as the substantial form, or animating principle, of the matter-form composite and, hence, not as a complete substance in its own right. In the contemporary period there are still a few voices in biblical studies who continue to argue that body/soul duality is embedded in the Bible (e.g. Barr, 1992), and, with them, a larger number of Christian philosophers who see the value of body/soul dualism in describing disembodied personal existence after death (Swinburne, 1997; Hasker, 1999; Cooper, 2001). It is recognized by others, however, that such views have tended to devalue the body and by implication the physicality of the creation.

Consequently, there has been a significant movement in near recent biblical theology towards seeing the human person as a psychosomatic unity (Green, 2008). Indeed dualism rather than monism is the minority opinion among biblical scholars over the past century (so Chamberlain, 1993). Thus, biblical scholars argue that the dominant view of the human person is that of ontological monism and the overall biblical picture presents 'the human person fundamentally in relational terms' (Green, 2004:85–100). Such ideas have, likewise, become increasingly popular within contemporary systematic and philosophical theology (cf. Pannenberg, 1991–1994:vol.2.182; Murphy, 2000:99–131; Miller, 2004).

Alongside this, feminist theologians/theologians in particular have pointed out the importance of the body and how it has often been devalued within Christian theology of creation. In particular, sexuality has been linked to sin with this in turn reflecting a broader understanding that the soul is good but the flesh is evil (cf. Brown, 1993). In this context, a rediscovery of the goodness of sexuality and of the body more generally has been a valuable contribution to the theology of creation (so Parsons, 1996; Ross, 1998).

## 2.6 Conclusion

So then, what is meant by the theology of creation within Judaeo-Christian tradition? In this brief overview we have seen that it says something about God's freedom and unique sovereignty in creating, in turn implying something about the fundamental goodness, or God-wardness, of all that exists and the consequent possibility of God's redeeming or transforming of situations. Again, we have seen that the theology of creation is not simply a conceptual belief but a code of practice, an ethic of living in the world as gift to be cherished and nurtured.

<sup>11</sup> See e.g. Gregersen *et al.*, 2000, Myers and Jeeves, 2002, Barbour, 2002, Green, 2004, also 6.3.1–6.3.3.

In the writings of Irenaeus, Augustine, and their later successors, one finds the essential features of the historic theology of creation spelled out: creation originates in the will of the Triune Creator, is made out of nothing, and is a continuing process, the product of the outpouring of God's goodness and love and the object of God's providential care. Creation, in obedient response to God's command but in accordance with the autonomy and integrity of powers and processes graciously bestowed upon it, brings into existence over time the various forms and capacities displayed by the manifold creatures that populate the cosmos. It is a theology ready for dialogue with science. It has provided the basis for the growth of that science and in as much as it is committed to the common reality of God's creation should be eager to hear from and contribute to the insights of science. It is this to this dialogue itself that we now turn, first historically (Chapter 3), then philosophically (Chapter 4), then with reference to specific sciences (Chapters 5–7).

## Further reading

- ASTLEY, J., BROWN, D. and LOADES, A. (eds.) (2003) *Problems in Theology 1, Creation: A Reader* (London & New York: T&T Clark)
- BARTON, S. and WILKINSON, D. (eds.) (2009) *Reading Genesis After Darwin* (New York: Oxford University Press),
- BURRELL, D.B. (1993) *Freedom and Creation in Three Traditions* (Notre Dame: University of Notre Dame Press)
- BURRELL, D.B. (2004) 'Act of Creation with Its Theological Consequences' in *Aquinas on Doctrine: A Critical Introduction*, ed. by T.G. Weinandy, D.A. Keating and J.P. Yocum (Edinburgh: T&T Clark International)
- FERGUSON, D.A.S. (1998) *The Cosmos and the Creator: An Introduction to the Theology of Creation* (London: SPCK)
- KAISER, C. (1991) *Creation and the History of Science* (London & Grand Rapids: Marshall Pickering & W.B. Eerdmans)
- WILKINSON, D. (2002) *The Message of Creation: Encountering the Lord of the Universe* (Leicester: IVP)