Toward a New Heaven and New Earth:
A Scientific, Biblical and Theological Exploration of Continuity and Discontinuity

Daniel C. Button
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ABSTRACT

This thesis is an interdisciplinary exploration of the level of continuity and discontinuity in the transition from creation to new creation. It brings into dialogue the perspectives of scientific, philosophical and biblical theology, examining several key issues independently in order to synthesise those conclusions into an overall assessment of continuity. The traditional eschatological narrative of death, judgement, heaven and hell has been rightly criticised as both lacking theological coherence and advancing a profoundly anthropocentric focus in distinction to a robust theology of creation. Many theologians now articulate a more biblically intelligible Christian narrative of 'creation to new creation'. In that theological framework, the human story is only a subplot – albeit a vitally important one – within the larger story of the whole of creation. The traditional post-mortem destiny of 'heaven' is replaced by the more expansive but grounded vision of 'a new heaven and a new earth'; the traditional Christian gospel of human salvation is expanded into a gospel of renewal for the whole of creation. Yet this creates challenging theological questions. What is the nature of transition from creation to new creation? How does the new heaven and new earth connect to the present, and to individual eschatology? Will this transition be a divine irruptive event or a gradual process – and what role for human beings? Questions of continuity and discontinuity are of central concern. This research explores these questions combining the insights of science, theology and the Bible with equal integrity and with the aim of achieving a high level of consonance, emphasising the representative voices of John Polkinghorne, Jürgen Moltmann and N.T. Wright. Practical and theological implications of a high degree of continuity are of vital importance in light of the current global climate crisis and its potentially catastrophic effects on both the earth and humanity. A vigorous Christian environmental response demands a theology of creation which includes an eschatological vision not only for humanity but for the whole earth as well.

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A Scientific, Biblical and Theological Exploration of Continuity and Discontinuity

by

Daniel C. Button

BA (Bethel University, Minnesota)

BA (University of Minnesota)

MDiv (Columbia International University)

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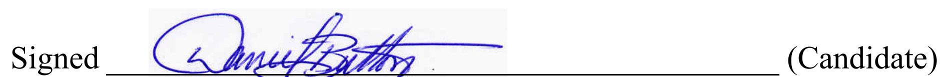
DECLARATIONS

This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

Signed  (Candidate)

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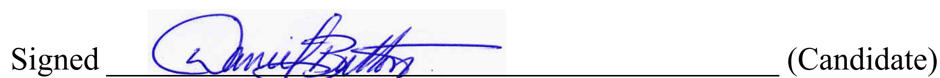
STATEMENT ONE

This thesis is the result of my own investigations, except where otherwise stated. Sources are acknowledged by in-text citations or footnotes giving explicit references. A full bibliography is appended.

Signed  (Candidate)

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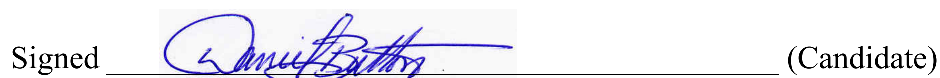
Signed  (Candidate)

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DEDICATION

To my Mother,
who instilled in me a love for God's word, both living and written

To my Father,
who gave me a love for science, for exploration, and for all of God's creation

To three giants of Christian faith
who inspired an uncompromising pursuit of truth, unity, and reality
in the task of integrating God's word and world:

John Polkinghorne, Jürgen Moltmann, and N.T. Wright

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As someone who loves learning, I will always owe a debt of gratitude to the many people whose conversations, insights, disagreements, and questions propelled me to delve ever deeper into explorations of the complex topics of eschatology and science – my students, teachers, colleagues, friends and family, far too numerous to name. I am tremendously grateful to all those who encouraged me along the way; without their inspiration I would never have reached this point. The wonderful hospitality of Professor Malcolm and Dolly Reid during sabbatical at Gordon-Conwell will never be forgotten. I wish to give special thanks to my supervisors, Revd Dr David Wilkinson and Dr Michael Burdett, who bravely took me on together with all my previous work after several years 'in the wilderness'. Their unflinching and wholehearted faith in my abilities to tackle such a multi-faceted research topic and hone it down to something sensible provided just the confidence needed. I will not forget their encouragement to 'hurry up and finish this because it's needed out there. You can write the books later.' Likewise, very special thanks for the incredible support provided by OCMS both academically and personally, notably my mentor and dean Dr Tom Harvey, whose unfailing good humour always lifted me from despair at the task ahead; and my research cohort for their prayerful support, friendship, and constant encouragement.

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Finally, a huge thank you to my wife Rosie and children Abby and Alex, whose longsuffering endurance of 'the PhD' will never be forgotten. May they find their reward in the new creation.

Unless otherwise stated, all biblical quotations are from:
The Holy Bible (NIV)
New International Version
The Compact NIV Study Bible
London: Hodder & Stoughton, 1985

Biblical book abbreviations follow standard notation.

Referencing follows the Harvard System
using in-text citations and bibliography
Footnotes are used for longer references
and supplementary material.

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Chapter 1
Introduction: Method and Approach

Research Problem and Rationale

This research explores questions of the future. Concern for the future has occupied the attention of every society, culture and religion throughout history. Individuals likewise have always been concerned about what lies ahead, with questions of life beyond death preoccupying human thought from the beginning, perhaps central to the very notion of what it means to be human. In our contemporary world these concerns have become more vexing than ever. Many would agree our world is in an existential crisis. The future of our planet, the natural world in all its biodiversity, our way of life, and as some conjecture, the future of humanity itself – are in jeopardy. Not only will the potentially catastrophic effects of climate change affect future generations, but the current sense of apprehension, social angst and uncertainty is already deeply affecting the lives of people now, globally.

The present anxiety about climate change is largely based on scientific prognostications of the future – using present knowledge and trends to forecast as accurately as possible what lies ahead. Science is not alone in postulating future conditions from prior knowledge; religion has long done the same, though arguably in a more speculative way. This research is focused on a particular perspective on the future: that of the Christian faith. While any view of the future is by definition theoretical, Christianity is a faith grounded in historical truth. Likewise, its future vision of the world – a paradoxical mix of a devastating apocalyptic 'ending' and a peaceable kingdom in a perfected new creation – is grounded within a historical trajectory rather than an idealised utopian or disconnected spiritual vision. Exactly *how* this future will emerge is a controversial question, but the Christian hope is a future hope: one of continued life beyond death, as well as a world where sin, wickedness and evil no longer exist.

Yet an alternative and pervasive Christian narrative contradicts this future outlook and abrogates its effects. It asserts that our lives on this earth are short, we live as 'strangers in a strange land', wayfarers and pilgrims until we die, finally reaching our eternal home in heaven. The discord between these two narratives is stark, and constitutes our initial

dilemma, explored in depth in chapter 3. The analysis there will show that this picture is biblically unfounded and theologically disjointed.

The second problem is far more difficult to unravel. Assuming the 'creation to new creation' narrative is more biblically faithful and theologically coherent, questions of continuity and discontinuity immediately rise to the surface. Discontinuity between the present age and the age to come, or the present creation and new creation, fosters a Christian worldview diverging significantly from one based on continuity. The embedded beliefs of any worldview deeply impact the way people live, and Christianity is no exception. If Christian theology depicts a future radically disconnected to the present, the implications of that understanding will contrast markedly with those of a future closely intertwined with or dependent on the present. At the very least such division leads to uncertainty, preventing a unified and robust Christian response to the ecological crisis facing the world today. Worse, it foments discord and confusion, stultifying the efforts of those who attempt to respond to ecological issues from a standpoint of theological conviction. Whichever theological perspective is adhered to deeply impacts the value which Christians place on caring for – or indeed saving and preserving – the creation in its present form, and the question of continuity versus discontinuity lies at the heart of the matter. The practical rationale for seeking resolution is clear.

Yet the question of continuity vs. discontinuity is not a simple either/or dilemma. Rather, elements of both lie along a spectrum from greater to lesser. This complexity increases when applied separately to questions of the earth, humanity, or the individual. Apparent continuity or discontinuity in one may contrast with its appearance in another. For example, does an 'end of the age' for humanity imply an 'end' to the earth? Does continuity between creation and new creation cause a theological dilemma for the apparent discontinuity of the individual moving from life to death and on to new life? The challenge is not only to assess the topics independently, but to assess how each of those results fits into the broader framework of the *whole* transition from the present age to a future age: the new heaven and new earth. Interconnectedness between individuals, humanity and the earth requires a resolution which encapsulates all within a single theological framework; for this framework to be truly plausible it must furthermore be reconciled with a scientific perspective.

The modern science-theology discourse has carried on for many years and is thriving today, yet involves only a small minority of interested scientists and theologians, often with only a modicum of biblical input. Little dialogue has taken place specifically on the concept of 'the new heaven and new earth' or on evaluating *how* it will come about, and I have found no work that attempts to analyse from these combined perspectives, all of the key topics impacting on the inherent problem of continuity / discontinuity. The biblical data and its interpretation is a crucial component, for it forms the very basis of any science-theology discourse on the concept, yet is often neglected. There is a great need for a critical exploration which brings all three perspectives into dialogue with equal integrity. If science and theology can agree on a critical-realist approach to the question of the future, it is my contention that there is scope for these joint perspectives to reveal new insights which they cannot perceive independently. The nature of such a science-theology discourse is the subject of the chapter to follow.

Background, Method and Approach

The subject of this research is the New Heaven and the New Earth (NHNE). Although often considered a metaphysical or spiritual concept, the NHNE is rooted in the biblical text in the form of prophetic insight and revelation, and so must be understood within that biblical and historical context. It also forms a key component in the larger Christian worldview - the narrative of God's relationship with the world from creation to rebellion to redemption to new creation – and is therefore a topic central to theology, specifically within the framework of eschatology. Considering the NHNE as merely an abstract or metaphysical construct would be an unfounded hermeneutical presumption, since the new creation is posited biblically, at least in part, as an extension of past and present creation. One may debate the nature of the process, of God's involvement, its deeper metaphorical meanings and spiritual significance, but its physical character must also be given full consideration.

In fact, despite this common association with a spiritual or otherworldly notion of 'heaven', current scholarship regards the NHNE as a very real, physical destiny for the earth.[1] The progression from creation to new creation may then be seen as continuous

[1] The historical and theological basis for conflating heaven and the NHNE is explored in chapter 3. All scholars in this study maintain the new heaven and new earth as the future destiny of the present physical world.

and teleological, the *new* creation in some way arising from and directly connected to this present creation. In this sense, it might be understood within a scientific framework as a part - albeit a future part - of the same space-time continuum as present earthly existence. Science may thus offer key insights alongside the biblical and theological perspectives. My contention is that this scientific perspective is a vital component in understanding the nature of the new heaven and new earth. Without it, any theological discussion of the NHNE is not merely incomplete, but prone to non-realistic speculation. Theology on its own lacks the constraints and grounding in the physical realm which the discipline of scientific thinking brings. Theology must also take seriously the biblical context from which its own eschatological thinking emerges.

When all three perspectives are joined together the possibility emerges of a rigorous and fruitful discourse producing new insights beyond the bounds of each individual discipline, yet plausible to each within an agreed methodological framework. Without this joint approach, theological speculation on the NHNE is subject to well-deserved criticism from the other disciplines and is all too easily dismissed as mere conjecture. Each perspective is therefore critical, and this research takes place at the intersection of the three: biblical, theological, and scientific.

A three-way exploration however is a complex undertaking, and the need to condense the sometimes wide-ranging thought within each perspective into a narrower framework of discourse is clear. Special priority is therefore given to key representative voices from within each discipline. Fruitful dialogue cannot be achieved *between* perspectives unless clarity and distinct positions can be identified *within* each perspective. Furthermore, a truly productive discourse requires representatives who adhere to shared presuppositions and methods. Three representative voices have been chosen:

John Polkinghorne	**(scientific theology)**
Jürgen Moltmann	**(philosophical/systematic theology)**
N.T. Wright	**(biblical theology)**

These voices are not used exclusively but are given special emphasis to provide an important focus and limitation to the research. These three alone do not engage with every topic covered; gaps are filled from elsewhere, and idiosyncrasies in their propositions modified by others.

The selection of these three voices was critical to this approach. Each is highly regarded in their field, yet able to critically engage with the other perspectives. Each demonstrates an eagerness and ability to push beyond their own discipline's boundaries toward a wider engagement, with a view toward complementarity and coherence. And each is eminently well-suited for the type of inter-disciplinary dialogue necessary to achieve a harmonious interaction open to new insights. The main criteria for selecting these voices was as follows:

1) recognition within their own fields as leading scholars
2) similarity in general approach and presuppositions
    a) a regard for biblical scripture as true and authoritative (subject to interpretation)
    b) a critical-realist approach in pursuit of unity or consonance
    c) a view of revelation in God's *word* and *world* as equally valid and non-contradictory
    d) an eschatological outlook, interest, and expertise
    e) a willingness to speculate beyond accepted or orthodox positions
    f) a concern for application to human life and community
3) a wide-ranging corpus of work (both in scope and over time)
4) consistent interaction and engagement with the other disciplines (or with each other)
5) current response to recent developments (previous two decades)

Polkinghorne, Moltmann and Wright fulfil these criteria thoroughly, and each bring an extensive and wide-ranging corpus of publications to the dialogue.[2]

Using this method enables a critical assessment of topics related to the NHNE in terms of continuity and discontinuity. The NHNE has long been a subject of intrigue and fascination amongst Christian scholars, theologians, and the church in general, engendering an enormous amount of diverse speculation and controversy. It is a multifaceted topic forming the ultimate depiction of Christian hope, not only for the individual but for humanity and the earth. Its challenge as a research topic is magnified by the fact that the NHNE is primarily a *future* concept. Even if in some way it exists

[2] Over several decades each has published substantial numbers of individual books and edited volumes, dozens of chapter contributions and scholarly articles. Refer to bibliography for lists of their relevant publications.

presently as some suggest, its presence is invisible and indiscernible by any direct method of observation.

My approach to this challenge is simply to grant the validity of the biblical premise that there will indeed be a future NHNE, then focus on questions of potential continuity and discontinuity in the transition from the present to the future age. This indirect approach allows a picture of the NHNE to emerge from a bottom-up analysis rather than through top-down theological assertions. By assessing the various aspects of moving from the present to a future age, the research highlights the progressive, teleological *possibilities* of the present creation (physical earth and cosmos), the present age (linear time), and human life (including life beyond death) extending into a contingent future.

Literature and Key Representatives

Because of the number of individual topics to be assessed in this research, a great breadth and variety of literature is involved and some analysis of relevant literature is dispersed around each topic. However, the overall breadth is narrowed down in two specific ways: first, by focusing on the use of the three representational voices mentioned above; second by emphasising only the aspects of each topic which particularly address issues of continuity and discontinuity and which are most valuable to interdisciplinary engagement. Here we consider the background of each of the three key authors and then assess their important contributions to the relevant literature.

Representative Voices

Since the emphasis on these three representational voices is central to the research method, it is important to know something of their background and experience. In comparison we find strikingly different personal backgrounds and formative experiences overlapping in a shared sphere of interest. Polkinghorne (scientific-theology) is considered a 'founding father' of the modern science-religion dialogue (together with Ian Barbour and Arthur Peacocke).[3] His exemplary scientific credentials include serving as Professor of Mathematical Physics at Cambridge for over a decade (1968-79),[4] before resigning to study theology and train for the Anglican priesthood. Polkinghorne is the

[3] The modern dialogue is generally traced to Barbour's 1966 landmark *Issues in Science and Religion.*
[4] In addition, Polkinghorne is a Fellow of the Royal Society, was Honorary Professor of Theoretical Physics at the University of Kent, and Fellow, Dean and Chaplain of Trinity College, Cambridge.

most intentional of the three in constructing a science-faith dialogue, with a broad corpus of writings on the philosophical relationship between the disciplines as well as on specific topics of common concern to both.

Moltmann (systematic-theology), is most widely known among late-modern theologians for catapulting eschatology from the periphery of theology into a central position within academic and applied theology with his work *Theology of Hope.*[5] As Richard Bauckham notes, 'It changed the way Christian eschatology was understood over a wide spectrum of contemporary theology' (1999:xiii). He stands in the German scholarly tradition, from a Protestant-evangelical confessing church perspective, having converted to Christianity from a secular upbringing while a prisoner of war during WW2. His earlier interest in mathematics and relativity theory is evident in his desire to integrate current scientific thought and process in his theological developments. His major works were written in German and translated into English. Moltmann was professor of systematic theology at the University of Tübingen from 1967 until his retirement in 1994, though his writing and powerful influence in theological thought have continued well into the present century.

The contribution of N.T. Wright (biblical-theology), as a New Testament historical scholar with an evangelical perspective and an eschatological orientation, maintains the vital biblical grounding in the discourse. Wright came to prominence with the publication of his monumental multi-volume work on 'Christian Origins and the Question of God'.[6] He maintains a keen awareness of the hermeneutical disparity often evident between the modern/scientific worldview and the original Jewish/early Christian worldview in interpreting biblical meaning and metaphor. As a popular as well as academic writer and speaker, Wright has written numerous works bringing biblical interpretation into direct engagement with contemporary issues, including issues of science, philosophy, ethics and environmental concerns. After resigning in 2010 as

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[5] Published in German in 1964, English in 1967. S. Williams (2006:14) credits both Moltmann and Pannenberg with generating the greatly renewed interest in eschatology of the 1960-70s culminating in their most substantial works on eschatology (Moltmann's *The Coming of God* (1996) and Pannenberg's vol 3. of *Systematic Theology*) both published in English in 1996. But he notes that Pannenberg himself gives Moltmann 'pride of place' in eschatological impact (2006:16). Cf. Polkinghorne and Welker (2002:7) on Moltmann.

[6] This series was twenty years in process, the first volume *The New Testament and the People of God* published in 1992, followed by *Jesus and the Victory of God* (1996) and *The Resurrection of the Son of God* (2003), with the last, *Paul and the Faithfulness of God,* split into two volumes published in 2013.

Bishop of Durham (Anglican) he became Research Professor of New Testament and Early Christianity at St Andrew's University.

Although Polkinghorne and Moltmann are long retired, they have all three remained actively engaged in speaking and writing until very recently. Each has written extensively across a broad topical range over a period of 25-50 years, are familiar with one-another's work, and have occasionally engaged in direct dialogue in areas of overlap. All three are believing and practicing Christians, each with pastoral or ministerial backgrounds in their respective traditions, thus intimating their concern for the application of theological insights to the people of God and giving a meaningful purpose and direction to their academic pursuits.

Important Contributions

Polkinghorne's science-theology corpus of more than thirty books was launched in 1983 with the publication of *The Way the World Is: The Christian Perspective of a Scientist.* Over the next decade several more works explored the interaction of science and theology, including *Science and Creation: the Search for Understanding* (1988), *Reason and Reality* (1991), and *Science and Christian Belief* (1994). By the mid-1990s, a dramatic increase in academic science-faith dialogue resulted in several new institutes being formed to promote joint research projects, and several high-level international conferences and consultations in which Polkinghorne took a prominent role. He wrote dozens of highly-regarded articles and book chapters on cutting-edge topics, edited an important volume arising from a three-year consultation on eschatology, *The End of the World and the Ends of God* (2000),[7] and contributed to a follow-up consultation on *Resurrection: Theological and Scientific Assessments* (Peters, Russell and Welker eds, 2002). His later works continued to deal with new developments in the science-theology discourse, as well as reflecting back over their history and progression.[8]

As a former physicist, Polkinghorne's particular areas of insight are cosmological rather than biological, the exception being a concerted effort to propose a scientifically coherent depiction of the soul, that aspect of human personhood that continues through death and

[7] Following from this consultation, he added an important summary volume on eschatology, *The God of Hope and the End of the World* (2002).
[8] See for example 'Science and Religion: Where Have We Come from and Where Are We Going?' (2006b), or 'Where is Natural Theology Today?' (2006c).

into resurrection. His unique proposal of 'an almost infinitely complex information-bearing pattern associated at any given time with [the] material body' (2008:104) reflects his attempts to seek consonance between science and theology in even the most challenging areas. All his works faithfully adhere to the central tenet that 'both domains of inquiry are necessary if we are truly to comprehend the way things are' (1994:193).

Moltmann's first major work *Theology of Hope* (1964/1967) not only brought eschatology into the mainstream of theological thought but proposed a future-looking approach to theology in general. As Bauckham notes, 'All of Moltmann's considerable corpus of work since *Theology of Hope* has had an eschatological orientation and eschatological themes have often recurred in it' (1999:xiii).[9] This includes *The Future of Creation* (1979), *God in Creation* (1985), and his most important work in developing the *content* of eschatological thought, *The Coming of God: Christian Eschatology* (1996). In this we find an attempt to carefully and rigorously relate eschatology to history, creation to new creation, personhood to resurrected life, and history to key questions of time and eternity. Although he does not consistently address the correlation with scientific thought as Polkinghorne does, his emphasis on historical connection and continuity provides the necessary theological underpinnings for that engagement, and he specifically explores that interaction in *Science and Wisdom* (2003). Moltmann's later works continue to develop eschatological thought in critical engagement with contemporary issues, notably the ecological / environmental crisis.[10]

As a New Testament scholar and biblical historian, N.T. Wright places a similar value on history in relation to eschatology. Wright brings to the discourse an important corrective to the science-theology discourse – a rootedness in the biblical text and an assiduous regard for the first century Jewish/early Christian context. This is often a missing component in science-theology dialogue, even though the content of that dialogue originates in the Bible. Wright has particular expertise in Jewish/Christian thought, in

[9] Moltmann reflects on his own theological writing as having, 'a biblical foundation, an eschatological orientation, a political responsibility' (1992:182).
[10] E.g. *In the End – the Beginning* (2004), *Sun of Righteousness, Arise!* (2010), *Ethics of Hope* (2012), and *The Spirit of Hope: Theology for a World in Peril* (2019).

Pauline theology, and in the resurrection of Jesus, an area in which he gained considerable notoriety debating with more liberal scholars.[11]

After his groundbreaking publication of *The Resurrection of the Son of God* (2003), Wright's writing turned more specifically to eschatology. The uniquely historical-eschatological aspects of resurrection prepared the way to tackle in *Surprised by Hope* (2008) the pervasive misconception that the ultimate goal of the Christian life is heaven. While few scholars uphold that view today, it permeates the popular Christian understanding and has a well-established theological history, therefore his corrective is vitally important to this thesis. Wright's writings reflect a deep integration of bible and theology. While he does not intentionally engage with science per se, several later works, such as *Creation, Power and Truth* (2013), *Surprised by Scripture* (2014) and *God in Public* (2016) engage deeply with contemporary culture in which the scientific outlook features strongly. *History & Eschatology* (2019) emphasises natural theology – including cosmology – in eschatological perspective. Wright's corpus includes over 70 books. While many were written for a popular audience they also reflect his great depth of biblical, scholarly and academic insight.

Structure

As mentioned previously, this thesis approaches its primary topic – the new heavens and new earth – indirectly, by assessing the level of continuity and discontinuity in several key related topics, each with an important role in extrapolating the most plausible view of this future concept. The structure therefore explores these topics individually, while at the same time attempting to connect them to a broader theological framework with respect to continuity and discontinuity from present to future. Chapter 2 establishes the nature of the science-theology dialogue, which plays a crucial role in each of the topics and provides a rationale for the particular model of interaction followed throughout.

Chapter 3 deals with the particular challenge of the conflationary language of 'heaven' and its relationship to the *new* heaven and new earth. Because the traditional view of heaven as the ultimate destiny for human beings retains such strong popular and often theological support, it can easily confuse or overwhelm the discussion, implying a

[11] See for example the Crossan – Wright dialogue in *The Resurrection of Jesus* (Robert Stewart ed., 2006), and *The Meaning of Jesus,* a debate between N.T. Wright and Marcus Borg (1999).

position of almost total discontinuity. Special care is taken to examine and refute this view before moving to the topics which contribute positively.

The next chapters explore topics related to individual, cosmic and corporate eschatology respectively. Chapters 4-5 examine the continuity of the individual with respect to personhood and the soul, death, eternal life, and the intermediate state. Chapter 6 explores the continuity of the earth in relation to the cosmos and the physical time-space universe, while chapter 7 explores that continuity from a biblical and relational perspective, assessing biblical cosmology, temple theology and apocalypse. Chapter 8 examines corporate eschatology specifically in light of the concept of resurrection and its relation to continuity of life in a new creation. Chapter 9 critiques all these findings in order to determine overall the most plausible model of continuity/discontinuity in a holistic theological framework. Determining that a high level of continuity is the most plausible resolution, it briefly explores the practical implications of this continuity for Christian theology and mission in the context of climate change and the current environmental crisis.

Terminology

NEW CREATION / NEW HEAVEN AND NEW EARTH (NHNE)

Throughout this thesis these phrases will be used synonymously. The phrase 'new creation' occurs only twice in the Bible, referring to the individual (2Cor 5:17, Gal 6:15), thus the term NHNE is often preferred.[12] However, just as God's act of creation encompassed both the heavens and the earth (Gen 1:1), *new* creation depicts God's act of making a *new* heavens and *new* earth. 'I am making everything new' (Rev 21:5). The term 'new creation' is understood theologically in relation to the concept of eschatological renewal rooted in both OT and NT (Towner, 1996). Anthropologically it depicts persons already participating in this greater eschatological reality (Motyer, 2001:826), the 'individual side of the broad concept of the renewal of creation' (Towner, 1996:562).[13] Although used synonymously, the two phrases have a slightly different sense: 'new creation' is more dynamic, related to God's action, whereas the NHNE tends

[12] 'New heaven and new earth' is also rare, found only in Isa 65:17, 66:22, 2Pe 3:13, Rev 21:1. However, it clarifies the broader eschatological totality encompassed by both terms.

[13] See e.g. Wright (2013c:29): 'Christianity was and is about new creation – a new creation which began when Jesus rose from the dead, which will be completed in God's new heavens and new earth, and which is glimpsed and grasped partially, but still truly, through the Spirit in the present.'

to evoke a finished product, due to its close association with the New Jerusalem 'coming down out of heaven from God' in John's vision (Rev 21:1). While this may be a mischaracterisation of the NHNE, it is nevertheless useful to have both alternatives.

SCIENCE AND FAITH / RELIGION / THEOLOGY

The relationship between science and religion as discussed in chapter 2 is multi-faceted and the terminology varies between different authors and in different contexts. Although 'religion', 'faith', and 'theology' all have different meanings,[14] their distinctions are not important in this thesis and unless otherwise noted the terms are used synonymously and in reference to Christianity. At times the more general term 'faith' is preferred over the more academic 'theology', but normally 'science-theology dialogue' is used.[15] Whichever term is appended to 'science' indicates the dialogue between science and theistic/Christian theology.

PHILOSOPHY

Like science and theology, philosophy is a distinct discipline, but in this thesis corresponds more often to the domain in which the science-theology discourse takes place. Polkinghorne explains:[16]

> A dialogue between two disciplines, such as that between science and theology, has to involve discourse at a metalevel capable of embracing them both. One may consider this second-order place of meeting to be philosophy, without implying that the latter is in a position to be the arbiter of what the two first-order disciplines may have to say to each other. (Polkinghorne, 2001a:795).

While recognising its potential analytical role,[17] Polkinghorne is reluctant to give philosophy any priority of judgement in the science-theology discourse. Following his cautionary approach, this thesis emphasises the mediating role of philosophy rather than the analytical.

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[14] For further insight on the challenges of defining 'religion' and religion's relationship to different types of science, see McGrath (1999:ch2).

[15] The preference for 'theology' is primarily in recognition of theology as something one *does* – in terms of scholarly engagement, exploration and critical reflection – rather than the phenomenology and praxis of religion or the set of beliefs of faith. The key consideration in the science-theology dialogue is the *task* of theology (e.g. Hefner, 2001:802; Cf. Peacocke, 1971:13).

[16] Cf. Pannenberg: 'In the dialogue between theologians and scientists, it is important to be aware of the fact that such dialogue does not move on the level of scientific or religious discourse but rather on the level of philosophical reflection on both scientific terms and theories and religious doctrines' (2001:783).

[17] O'Connor expresses this analytical role: 'It falls ultimately to philosophical analysis to comment on the relative merits of claims regarding origins and cosmology, quantum indeterminacy, human nature, reductionism, determinism, chaos and complexity, naturalism, and so forth' (1999:3).

THEOLOGY

1) Unless otherwise indicated, 'theology' refers exclusively to *Christian* theology.[18]

2) There are many types of theology; this thesis emphasises three: scientific theology (arising from a scientific perspective), biblical theology (rooted in the biblical text and interpreted in light of its historical context), and a more speculative type referred to as philosophical theology. The latter is rooted less in the established doctrines of systematic theology than in rational insights,[19] and the term is used to distinguish it from the other two rather than to convey a specific definition. Any of these may be referred to singly or corporately as 'theology'.

3) 'The term 'theology' has become widely accepted within the Christian community to refer to intellectual reflection on the content of the Christian faith (McGrath 1998:32). 'We might define Christian theology as the discovery, understanding, and justification of the convictions that are held by Christians or presupposed by their beliefs and practices' (Murphy 1996:154). These two definitions provide a good approximation of the nature of the theological task in this thesis. Discovery, understanding, justification and intellectual reflection are all involved, though not necessarily in line with convictions already held or presupposed.

SCIENCE

Like theology, there are many types of science. A great deal of controversy is inherent in any attempt to define or describe science;[20] it too is a multi-faceted discipline – yet continuously progressing and changing (see chapter 2). Fifty years ago, Peacocke was able to refer to science as 'a fairly well-defined activity, both practical and intellectual, aimed at understanding the physical and biological world or, as is often said, 'discovering' its nature and structure' (1971:12-13).[21] Today this description works only as a starting point. Our physical and biological world is now known to be deeply dependent upon and influenced by its relationship to processes of an unpredictable,

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[18] The science-theology dialogue involves a range of scholars, some of whom would refer to themselves as 'theistic' rather than specifically 'Christian'. For most topics this distinction is not relevant, but where it is those differences will be noted.

[19] Polkinghorne expresses this difference: 'Theology has a dual role. As systematic theology, it is a particular discipline, concerned with those aspects of our encounter with reality that serve as the specific vehicles of religious experience. As philosophical theology, it is seeking to act as the great integrating discipline that expresses the unity of our knowledge of the one world of our experience' (1996a:12).

[20] Polkinghorne often notes that both theology and science are famously difficult to define, and certainly the volume of literature grappling with the inherent challenges of doing so bears this out. On science see e.g. Moreland (1994), Bube (1994), Meyer (1994), Laudan (1988).

[21] Cf. Michael Polanyi's depiction in 1967: 'The purpose of science is to discover the hidden reality underlying the facts of nature' (in McGrath, 2016:11).

unmeasurable, and even unknown nature.[22] Nevertheless, the term ‘science’ still conveys the *activity* of the scientific endeavour with its limitations and restrictions. Once this moves into the public realm, it must immediately be *interpreted*,[23] and this interpretation brings it into a broader philosophical domain – and into dialogue with theology – where non-empirical and conceptual problems may be explored from a science perspective. In this thesis ‘science’ is used with this dual sense in mind: the initial scientific activity, and a perspective of interpretation.

[22] These include both physical and non-physical aspects such as quantum characteristics, emergent properties, the human mind, and divine action. See Polkinghorne (1995d:104-5; 2011:42ff).
[23] Polkinghorne most clearly expresses this point: ‘Science does not deal with a world of pure fact; it deals always with a world of interpreted fact. This means that science is always concerned with a mixture of fact and opinion (1995a:39-40). Pannenberg adds, ‘when scientists talk about the general meaning and significance of their equations and theories, they already move on some level of philosophical reflection’ (2001:783). The distinction between *pure* science – gathering data, experimentation, collation – and the *interpretation* of science, cannot be maintained in inter-disciplinary discourse.

Chapter 2
The Interdisciplinary Convergence of Science and Faith

'…affording a many-eyed view of reality'
John Polkinghorne

Introduction

Christian theology and the Bible historically share a close and interdependent – if at times uneasy – relationship. The relationship between science and faith introduces a more modern and challenging dynamic. A key contention of this research is that an interdisciplinary engagement between science, theology, and the Bible is a crucial consideration which will not only fill certain gaps in understanding but will overcome limitations or weaknesses[24] in each discipline's approach to the future, potentially enabling new insights to emerge. Such insights, if acceptable within all three perspectives, will be more robust, plausible, realistic, and able to withstand criticism than would insights arising from just one or even two disciplines, and therefore less easily dismissed. This interdisciplinary engagement exerts a critical influence on current theological views of continuity and discontinuity from the present to the new heaven and new earth. The significance of this contention warrants a deeper examination of the relationship between science and faith.[25] This chapter therefore sets out to identify common interdisciplinary foundations and establish an accommodating approach and method for a science-faith interaction, while recognising the distinctive characteristics and contributions of each.

What does science have to say about a biblical concept such as the New Heaven and the New Earth? At first glance, nothing; there seems no common ground. How could science possibly comment on something so abstract as a speculative, futuristic biblical concept? To be fair, the same challenge faces theology; direct biblical references are sparse and frustratingly incomplete, the language metaphorical and apocalyptic, at times

[24]These will be discussed in a later section, but include physicalism or reductionism in science, non-realist speculation in theology, and the unchanging parameters and contextual antiquity of the biblical canon.
[25] 'Faith' here encompasses both theology and Bible – not merely as an academic discipline but as a perspective from within the worldview or belief system that faith conveys. Unless otherwise indicated, the terms science and faith, science and religion, or science and theology (each used by different authors) will be considered on a par.

even contradictory.[26] Images of streets of gold and a river of life in a cube-shaped city 12,000 stadia in every direction[27] seem more fantastical and visionary than a grounded systematic theology is comfortable handling.[28] In either case, the direct approach may simply be a step too far; but indirectly there are surprising possibilities.

Science for example may have little directly to say about 'life after death' yet has much to offer on the causes and nature of physical death. Theology gains a great deal from these scientific insights,[29] enhancing its own understanding of death, life, body and soul, as well as issues of continuity and discontinuity of life beyond death. A scientific view of time may shape a theological understanding of eternity; a scientific evaluation of the ecological interdependency of life on earth may shape a theological understanding of life in a new earth. Likewise, theology can return its own insights to science: elucidating the spiritual aspect of human nature; revealing a teleological purpose to time in God's perspective; offering the hope of a renewed earth beyond the empirically observable. Such reciprocity illustrates the intent of this chapter: to establish the conditions by which an inter-disciplinary dialogue may be used to develop, directly or indirectly, theoretical concepts not fully accessible or understood by either discipline.

Jürgen Moltmann poses the question, 'Must we decide between the church and the laboratory? Are sciences and humanities two different cultures or two different windows onto reality?' (2001a:155). Do science and theology have *anything* to say to each other – and if so, how? John Polkinghorne suggests that 'we should welcome these multiple perspectives as affording us a many-eyed view of reality' (2001b:145). He cites the rich and many-layered complexity of human experience as adequate justification. His assertion of a single reality is a fundamental recognition in the science-theology dialogue. Maintaining the principle of differing 'perspectives' enjoins a common goal of discovery rather than merely independent analyses of distinct disciplines. If a concept such as the new heavens and new earth is not sufficiently comprehensible in one discipline, a

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[26] Compare for example Isaiah's vision of long and fulfilled lives (Isa 65:20) with John's vision of 'no more death' (Rev 21:4) and former things 'passed away', both ostensibly in the context of new heaven and earth.
[27] Rev 21:16, 21; 22:1.
[28] However, several solid exegetical works make just such an attempt, e.g. Mathewson (2003), Beale (2004), Middleton (2014).
[29] The possibilities of 'natural theology' in this capacity are explored in some depth by Moltmann (2000:ch6), McGrath (2016:ch10) and many others. McGrath for example states, 'science, when rightly understood, can inform and enhance a Christian understanding of nature, offering it an expanded account of both the natural world and the process by which we behold and respond to it' (2016:178).

collaborative approach – sharing the discoveries from each unique perspective – may yield new insights. 'It is by combining the different perspectives… that we shall gain the most adequate understanding of the way things are and what their significance may be' (Polkinghorne, 2001b:145.). This approach requires a respectful understanding of each discipline's distinctiveness and commonalities. This chapter therefore begins with an overview of the mutual foundations which provide the framework for both scientific and theological exploration, then moves to examining the nature of the dialogue, suggesting a mutually coherent method and approach.

Mutual Foundations

Underlying the disciplines of both science and theology are those fundamental drives and passions of human nature which, while rarely considered among the traits necessary to a particular discipline, subconsciously motivate *all* human endeavour and make those disciplines possible. While many such traits traverse disciplinary boundaries, a few resonate particularly in science and theology and provide the mutual foundations upon which both disciplines may grow and develop in tandem. Among these are the sense of wonder, the desire for wisdom and understanding, the search for ontological truth, and a view of a holistic reality.

Wonder & Astonishment

A new discovery awakens a sense of wonder and astonishment familiar to every human being. Seeing something for the first time, we innately try to categorize and order, to place it into a familiar fabric of prior experience, or the noetic network of our worldview. Failing that, our response to the unknown may be fear and disorientation – or wonder and astonishment. Astronomer Jennifer Wiseman observes that new cosmic discoveries evoke responses of praise, humility, and awe. 'An enormous, beautiful and complex universe speaks of an awesome God' (2012:11). Not all are drawn toward that conclusion, but the sense of awe and wonder springs forth regardless. Deborah Haarsma claims 'the mathematical order of the universe gives physicists a sense of wonder' (2018:24). Celia Deane-Drummond suggests that wonder lies at the heart of both science and faith, asserting that 'wonder is the gateway into scientific exploration' (2006:48); wonder 'helps to set the agenda for wisdom' and 'reminds wisdom that there is always

more to learn' (2006:14).[30] Wisdom according to William Brown is 'born from wonder' (2010:7). Deane-Drummond further argues that wonder opens up dimensions of the future and the transcendent not accessible to science, reminding science of its 'proper place in the scheme of knowledge' (2006:15), an important recognition that science alone provides an incomplete assessment of reality. Wonder about our eschatological future – whether humanity, life, or the universe – drives the desire to discover and speculate in both science and theology and forms the basis of this research.

Polkinghorne, Moltmann and Wright share these sentiments along with many others.[31] Moltmann suggests that at the deepest level, both science and theology act out of an intuitive sense of wonder about God and the universe. 'Astonishment is the source of intuitions' (2001a:155-6). Wonder perceives uniqueness and comprehends dissimilarity in the seemingly familiar, enabling science to proceed. Science 'discovers', while theology seeks to articulate 'the encounter between the awakened human senses and impressions of the outside world' (Moltmann, 2001a:155). This is not merely the preserve of theism. Cosmologist Carl Sagan, despite his certainty that 'the Cosmos is all that is or ever was or ever will be' (1980:20), nevertheless experienced the same wonder: 'Our feeblest contemplations of the Cosmos stir us… we know we are approaching the greatest of mysteries' (1980:20). He lamented a perceived religious reticence to share in the wonder of discovery within science (1994:50). Yet for Moltmann, the wonder of theology derives from the discovery of 'the fear of the Lord'. This he relates to God's complexity, immeasurability and sublimity (2001a:158), qualities which resonate quite closely with the complexity of life, the vastness of space and time, and the order and intelligibility of the universe, in scientific terms.[32] Although theology may struggle to incorporate the discoveries of science into its theological framework, and science may struggle to appropriate 'the fear of the Lord' into the language of science, clearly the sense of wonder and astonishment suffuses and motivates both disciplines.

[30] Deane-Drummond (2006) offers a substantial treatment of this concept, assessing the relationship between wonder and 'natural wisdom', 'human wisdom' and 'God as Wisdom'.

[31] Wright speaks more of 'beauty and truth' (2013:88; 2006a:ch4), suggesting that beauty 'is sometimes so powerful it evokes our very deepest feelings of awe, wonder, gratitude and reverence' and is 'a signpost pointing beyond itself'(2006a:38). Polkinghorne relates scientific wonder to 'the rational beauty of the world' (1995b:27). Cf. Giberson & Collins (2011:15ff), Hoezee (2003:66-70), McGrath (2002; 2005; 2016:ch5,10), McLeish (2014), Peacocke (2004:416), Ward (2006:ch2).

[32] See e.g. Polkinghorne on cosmology (1998b:34-48; 2002a:ch1-2).

Wisdom & Understanding

While 'wonder' may provide a common *motivation*, it is the pursuit of wisdom and understanding which demonstrate a mutuality of *purpose*.[33] Why do scientists and theologians do what they do? Polkinghorne captures the prevailing feeling amongst scientists when he claims, 'people who work at fundamental science do not do it to manipulate the world. They do it to understand the world.' (1995e:11). Scientists set out to investigate *how* things work; the answers are tangential to their need for *understanding.* While Polkinghorne asserts that science has been enormously successful in this quest (2011:2), he adds, 'this thirst for understanding that is so natural to scientists can never be quenched by science alone. Science can tell us a great deal about the world, but it cannot tell us enough' (1995e:12).

Polkinghorne's ability to critically juxtapose the two disciplines is based on his belief that they share 'a common commitment to the search for truth and the desire to find understanding' (2000c:956) referred to as 'motivated belief'. Theology may be described by Anselm's oft-quoted credo, 'faith seeking understanding', but whether faith is assumed at the start is incidental to the aspiration.[34] Science challenges theology to broaden its sources. 'If theology is about relating the world to God but does not take into account the world as known through science, then it fails' (Brown, 2010:8, cf. Moltmann 2003:7). Uniquely for theology, understanding the world is an important but not a sufficient purpose. While understanding centres on the individual, *wisdom* is relational; theology understands the world specifically *in relation to* God.

Moltmann's analysis of the relationship between science, theology and wisdom emphasises this relational character of wisdom.[35] Theology may be seen as a dynamic interrelationship between God, humanity and the world, where the role of theology is 'to represent the world for God and God for the world' (2003:6). Moltmann sees 'the fear of God and the love of God' as the proper frame of reference for all human knowledge

[33] The objective here is not primarily to differentiate wisdom from understanding, nor to assess wisdom's personification (*Sophia*) in Scripture (as in Dunn 1980:210; Deane-Drummond 1999:55), but simply to recognise the pursuit of wisdom and understanding as common to both disciplines.
[34] Beginning one's search from the standpoint of biblical revelation and faith is a 'top-down' approach. Polkinghorne and many scientists prefer a 'bottom-up' approach beginning from experience of the world (e.g. 2000c). In either case, faith may be considered the 'volitional posture' for understanding: Fleenor (2019).
[35] Moltmann (2003); see also Deane-Drummond (2006).

(2001a:159).[36] Scientific discoveries are therefore discoveries of God's wisdom permeating the world – whether or not acknowledged.[37] As Peacocke asserts, 'All such wisdom, imprinted as a pattern on the natural world and in the mind of the sage, is but a pale image of divine Wisdom' (2004:423). This relational aspect of wisdom is not only vertical but horizontal, for as Moltmann claims, wisdom is the ethics of knowledge. 'The wondering discovery of the world is one thing, wise dealing with these perceptions another (2001a:158). Through the framework of love of the Creator for creation, this relational wisdom extends to all of nature, paving the way for Moltmann's strong eco-theology and a Christian interpretation of the natural world in light of scientific knowledge.

Pursuit of Truth

While wonder provides a common motivation, and understanding expresses purpose, the third consideration is the end goal; for if the starting point and the end goal are shared, then surely the proclivity for dialogue and its essential framework are in place. This end goal, simply stated, is the discovery of truth.[38] Despite the post-modern tendency toward relativism and the dismissal of absolute truth claims,[39] science and theology share the essential characteristic of being realist enterprises, searching for – and inherently presuming the existence of – ontologically coherent answers to the ultimate questions of life, God, and the universe. As Polkinghorne explains, 'I am someone who has to take both science and theology with the utmost seriousness. They seem to me to share a common commitment to the search for truth…' (2000c:956). But his theistic stance also centres that search in the ontological truth of God: 'I am a passionate believer in the unity of knowledge, a belief that is underwritten for me by my trust in the one God, who is the ground of all that is' (2001b:145). Polkinghorne is not at all alone in this

[36] Moltmann refers to the OT maxim, 'The fear of the Lord is the beginning of wisdom and knowledge of the Holy One is understanding' (Ps 111:10; Pr 9:10).
[37] McGrath likewise argues from the doctrine of creation that 'in creation God imposes order, rationality, and beauty upon nature…[which] leads directly to the notion that the universe is possessed of a regularity which is capable of being uncovered by humanity' (1999:54).
[38] To Polkinghorne, this is why the science and religion dialogue matters (2006a). 'The pursuit of truthful knowledge is a widely accepted goal in the scientific community' (2007a:2). Welker adds, 'the issue of truth is paramount' (Polkinghorne & Welker, 2001:37).
[39] See J. Taylor's evaluation of the post-modern attack on realism concluding 'an idea of truth as a goal of rational enquiry is eminently defensible' (2005:99). Cf. Polkinghorne's rebuttal against the post-modernist critique of truth (2005a:ch1).

assertion.[40] Peacocke explains, 'In the exploration from the world of science towards God… the goal itself is unchanged. If indeed God exists, *is*, at all, the honest pursuit of truth cannot but lead to God' (2004:414).

Non-theistic scientists will challenge this presumptive association, but most would agree that the goal is the pursuit of truth – whatever that truth may be.[41] Polkinghorne observes that science and theology 'focus on different dimensions of truth' (2007a:1) but share a conviction that there is truth to be sought. Welker however, cautions that modern science has often 'reacted quite aggressively to religion and theology, assigning them to the realms of other-worldliness, of hyper- and virtual reality' (2001:167). Controversy between science and theology is not due to conflicting motivations or goals, but to conflicting methodologies with their inherent limitations, applied too broadly to the whole framework of knowledge. As Moltmann asserts, 'objective truth is not absolute truth; it is truth under certain conditions' (2003:13).

Finally, truth is not 'discovered' in a pure, abstract form; insights and discoveries must be interpreted and explained, often through frameworks of non-complementary language and images. Polkinghorne notes 'a vulnerability… imposed by the need to interpret experience before it can become intelligible and interesting' (2007a:3); 'There are no scientifically interesting facts that are not already interpreted facts' (2011:1). Practicing scientists may be cautious in expressing the wider implications of their experimental data, but those who interpret the science are not,[42] and it is at the level of interpretation that science and theology meet. For science-theology dialogue, these differing perspectives on truth (with a positive view toward resolution) are crucial for stimulating reflection and further investigation. Polkinghorne concludes, 'ultimately, knowledge and truth are one because God is one. In that belief we can face the intellectual challenges of the future, whatever they may prove to be' (2000e:941).

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[40] Cf. Giberson & Collins (2011:ch4). Moltmann laments what he perceives as the modern loss of conviction that 'truth is always *one* and has to be the truth of *the whole*. (2003:4 his italics).
[41] D.A. Carson's analysis suggests that although the influence of postmodern relativism is waning, it has left in its wake a general suspicion of truth claims (2005:111). However, truth claims are rarely asserted in the science-theology dialogue; the issue here is the pursuit of truth as a goal and motivation.
[42] Wilkinson (2005) explains why for example, the 'conflict model' remains dominant in public perception and media despite all the evidence of fruitful dialogue between science and religion.

Reality & Critical Realism

Unity of knowledge and truth presupposes a fundamental belief in a single objective reality.[43] This may seem manifestly obvious but in fact poses a serious philosophical dilemma. (One could posit multiple realities, subjective reality, or indeed reality as illusory). Like many others, Polkinghorne acknowledges differences in perceptions and perspectives rather than different realities, proffering the metaphor of 'windows':[44]

> Some windows may be larger and better placed than others, so giving a more extensive view; some have distorting glass; some are clouded over and hard to peer through; all impose the limitations of their particular perspective. Yet, all are looking out onto reality; all give us access from their specific point of view to that reality. I assert that reality to be one. (2001b:145)

In this metaphor, windows such as science, intuition, experience, scripture and theology each offer glimpses of the whole. Polkinghorne argues it is only 'by combining the different perspectives afforded by these many windows that we shall gain the most adequate understanding of the way things are and what their significance may be' (2001b:145; cf. 2006a:29).

This view of reality reflects the philosophical position of *realism*.[45] Scientific realism is essentially the affirmation that what science uncovers, observes, or discovers about the natural world reflects the way the world actually is.[46] As McGrath states, 'the simplest explanation of what makes theories work is that they relate to the way things really are' (1998:140). In Polkinghorne's assessment scientists are instinctively philosophical realists (2011:5), a view echoed by many others – although not without its detractors.[47] The more specific form of *critical realism,* developed in relation to the science-theology dialogue, undergirds the nature of the discourse as a whole, including the representative

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[43] Wilkinson notes critical realism's strong commitment to the view of a 'common reality' (2010:25; 1993:122). This is not to imply that reality can be known objectively, but that reality exists independently from human awareness or observation. See Trigg's metaphysical rationale (1998:76ff).

[44] For a more extensive exploration of these 'windows' on reality, Polkinghorne and Welker (2001:chs.1,7).

[45] For a detailed historical assessment and explanation of realism (or scientific realism) in its many forms including critical realism, see McGrath (1998:ch4), Gregersen (2004).

[46] Gregersen compares realism in science and faith: Both God and the world existed long before their 'human interpreters' arrived, therefore they are 'co-discoverers… investigating reality from different angles' (2004:77).

[47] See Barbour, Peacocke and Polkinghorne's views compared in Polkinghorne (1996a:11), Barbour (2010); cf. Moltmann (2003:8). On the countertrend of anti-realism, see Trigg (1993:6-7) and Moreland (1994:3). McGrath agrees that 'natural scientists tend to be realists, at least in the broad sense of the term' (1998:140) but notes the divisions and nuances in scientific realism and the challenges arising from philosophy of science (143-54). In theology there is 'a growing commitment to forms of realism' which has encouraged science-theology exploration to the extent that critical realism is seen as 'a convergence of views' (1998:154).

voices of Polkinghorne, Moltmann and Wright. For this reason, it warrants a further examination.

Critical realism developed as a means of showing 'comparability and compatibility of religious and scientific views of reality' (Murphy, 2003:42) with a carefully delineated awareness that neither could present absolute claims about reality but could instead offer limited or tentative views. The *critical* component 'acknowledges the subtle role that circularity and commitment play' in the practice of realism, denying assertions of absolute certainty (Polkinghorne, 2011:11). Polkinghorne warns of the dangers of a 'naïve objectivity' in assuming that scientific or theological assertions present a complete picture. 'The achievement of science… can be asserted to be what one may call 'verisimilitude', an ever tightening, but never total, grasp of physical reality' (2011:8). To enable dialogue, theology must also operate within a framework of critical realism, a practice Polkinghorne suggests is more difficult to maintain than in science – yet possible. 'Theology can defend its belief in the unseen reality of God by a similar appeal to the intelligibility that this offers of the general nature of the world and of great swathes of well-testified spiritual experience' (2011:11).

R.J. Russell traces the advent of this important concept in methodological terms to Ian Barbour (1966) claiming that critical realism has gradually become 'the predominant school of thought among scholars in theology and science' (2004:53).[48] Gregersen adds: '…further developed by Arthur Peacocke and John Polkinghorne, [it] has for decades been the 'orthodox' position in the field of science and religion' (2004:77). Critical realism rejects alternative philosophical approaches such as positivism, instrumentalism and idealism,[49] and views *intelligibility* rather than *observability* as the 'hallmark of the real' (Barbour, 1966:170). Moltmann agrees: 'The frame of reference for the perceivable world is its fundamental "knowability"' (2001a:159). As Polkinghorne explains:

> How we relate what we know to what is actually the case is a central problem in philosophy, and perhaps *the* problem in the philosophy of science. There are a variety of options, but the one chosen, consciously or unconsciously, by the vast majority of scientists is the strategy of realism. This seeks the closest possible

[48] Professing critical realists include Barbour (1974:29-70; 1997:119), Peacocke (1993:11-23; 1999:16), Russell (2004), Soskise (1987:107), Torrance (1985), Welker in Polkinghorne and Welker (2001:133), and N.T. Wright in NT theology (1992:32-8).

[49] Barbour explains: 'in positivism, a theory is viewed as a summary of data; in instrumentalism, a theory is a useful tool; in idealism, a theory is a mental structure; and in realism, it is a representation of the world' (1966:162).

> alignment between epistemology and ontology, what we know and what is the case. (2000e:942)

To this end Polkinghorne has coined the frequently used slogan, 'epistemology models ontology'. Careful choice of the word *models* allows both science and theology to speak confidently in epistemological terms of an ontological reality, despite the inability of human language (or knowledge) to provide a precise, demonstrable correspondence.[50]

The appeal to 'intelligibility' is an important development in critical-realist thought (Polkinghorne 2008:xv), particularly as scientific advancement has delved ever deeper into territory no longer corresponding to rational human experience, such as the 'strange and elusive nature of quantum entities' and 'quantum theory's idiosyncratic form of reality' (2008:16). Intelligibility thus becomes the criterion for ontological understanding, and Polkinghorne sees numerous ways in which this aids theology's obligation to articulate similarly enigmatic 'truths' such as incarnation, resurrection, or the human encounter with 'the veiled reality of God' (2008:17).[51] McGrath places *coherence* alongside intelligibility as the key components of a joint vision of reality (2016:9). For decades Polkinghorne has argued convincingly that the application of critical realism is 'fundamental to the entire human quest for truth and understanding' (2011:11).[52] He therefore advocates that the two disciplines of enquiry should be thought of as 'cousins'[53] because of their 'shared truthful intent' and because 'both operate under the rubric of critical realism' (2011:13).

However, critical realism is not accepted universally nor uncritically. Gregersen argues that while it operates as a bridge between a naïve realism and a purely constructionist view of knowledge, it 'only articulates the working assumptions of a majority of practicing scientists and believers', such that 'theories in science and theology have to be taken 'seriously but not literally'' (2004:77). Both atoms and God for example are believed real but are unobservable, so theories about either are subject to development and revision and can only 'approximate reality' (2004:77.). This principle works well in science, but less so in theology. For this reason, philosophers like Drees and Niekerk

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[50] Polkinghorne initially devised the phrase to explain the unexpected outcomes of quantum theory: 'it is ontology which controls epistemology' (1988b:335). Language cannot fully *depict* reality, but can closely model it, and that must be a satisfactory outcome for science.
[51] See Torrance's respected science-theology works on incarnation (1969 / 1997) and resurrection (1976).
[52] Critical realism is so fundamental to Polkinghorne's thought that he sets out its principles repeatedly: (1986:ch2; 1991:ch1-2; 1994:ch2; 1996b:ch2; 1998a:ch5; 2000b:78ff, 2005a:ch1, 2008:ch2, 2011:ch1).
[53] Further to this idea (2007a:ch 5).

embrace most elements of *scientific* realism but are sceptical of equivalent success in the implementation of *theological* realism.[54]

One other highly influential critic is philosopher Nancey Murphy. In the context of the ascendency of postmodern approaches to knowledge, Murphy argued (1988) that critical realism was mired in modernist presuppositions and a 'referential view of language' (Gregersen, 2004:78) while grounded in a foundationalist epistemology.[55] This sparked a good deal of philosophical debate – particularly around the use of theological language – in the intervening years.[56] She argued that 'even if critical realism stands up to philosophical scrutiny, it is not clear how it solves the problem for which it is invoked, namely to give an account of how theology and science interact' (1990:198). She may well have assigned to critical realism a task which was never its original intent. Critical realism works well as an *approach* to dialogue, but Murphy's desire was to go further, to establish philosophical grounds for methodological uniformity. Her critique helped pave the way toward such deeper interaction despite failing to convince critical realists of any fatal philosophical dilemma.

Polkinghorne and other advocates are well aware of these arguments[57] and have in some ways refined or reshaped their approach accordingly, but these are nuanced adjustments; there has been no move toward abandoning critical realism as a working theory.[58] There is little to be gained by re-assessing these criticisms in any greater detail here; they are predominantly philosophical and linguistic rather than pragmatic.[59] It is sufficient to accept with Polkinghorne, Russell, Peacocke, and McGrath that critical realism remains

[54] See Willem Drees (1996, 1990:ch5.2) and Kees van Kooten Niekerk (1998). Drees argues (1996:139-49) that the assumptions of physical reality in science are not the same as assumptions of spiritual reality in theology. For Niekerk, the transfer of a critical realist understanding between scientific statements and theological propositions is not possible without significant modifications as the disciplines are too distinct (1998:73).

[55] Murphy maintains this stance, arguing (2003:44) 'the critical realist position is modern, only modern and not postmodern…governed by the metaphor of knowledge as a picture or representation of reality.'

[56] For further elucidation on these criticisms, see McGrath (1998:155) and Gregersen (2004:78). Gregersen notes that for Murphy, 'the real issue was explanatory progress, not reality as it is in itself'. See also Murphy's more recent exposition (2006b:472-87).

[57] See e.g. Polkinghorne (2007a:3-10).

[58] Russell's essay (2004:53-4) outlines the key elements of critical realism, noting that each has raised complex issues highly debated over the past 50 years, yet despite this criticism, it continues to be upheld as a fruitful approach to science theology discourse. See also McGrath (1998:155-64).

[59] Murphy contends that critical realists 'use modern epistemological and linguistic categories, while opponents use postmodern categories' (2003:42).

largely the ‘consensus view’ amongst scientists and theologians, and at the very least has shown exceptional potential as a bridge between the two disciplines.[60]

Critical realists have not been reticent themselves to point out weaknesses or challenges in their approach, mainly centred around the distinct methodologies of the two disciplines. These include three very important considerations: first, the challenge that the scientific endeavour is by nature *progressive* whereas theology is *expansive*; second, that science takes place from a dispassionate observational standpoint while theology takes place within a relational dynamic and personal encounter with the sacred reality of God. This is a much more vulnerable standpoint, with very personal implications for those seeking truth from within a believing theological context. Third, neither science nor theology is practiced in isolation, but in the context of what Polkinghorne and Welker refer to as ‘truth-seeking communities’ (Welker, 2006:557), each with their own traditions, methods, practices and aspirations. Those seeking to bridge the divide must on the one hand maintain the integrity of that community’s expectations, and on the other, seek to find common ground. Critical realism must provide the opportunity to achieve both.

Having surveyed the merits and potential weaknesses of critical realism, for the purposes of this research we conclude that it provides a crucial foundation and solid basis for science-theology dialogue. It continues to be ‘defended, deployed and diversified widely in theology and science… and in much of the public discourse about both’ (Russell, 2004:54); more specifically, it provides a common commitment for the interaction of our three representative voices. Polkinghorne is a powerful advocate and Wright has strongly endorsed its application in his approach to NT studies and biblical theology (1992:32-46). His emphasis is subtly different than Polkinghorne’s, stressing the *relational* aspect of epistemology and the implication that knowledge of reality can never be fully independent of the knower. Moltmann, while sympathetic to the principles of critical realism, does not address the concept directly and is the least consistent in its application. Yet he espouses a strong kinship between science and theology (2003:ch1-2), joining ‘relational wisdom’ to the ‘knowability’ of the perceivable world.[61] Thus the wisdom of

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[60] Cf. Russell (2004:53), McGrath (1998:164), Peacocke (1999). Referring to MacMullin (1984), Peacocke concludes that ‘a formidable case for such a critical scientific realism has been mounted’ (1999:16).

[61] This difference in terminology and emphasis reflects a difference in Continental and Anglo-American styles of philosophy, where the former (e.g. Moltmann) seeks to ‘bridge the gap between wisdom and knowledge’ while the latter ‘allies itself as closely as possible with science’ (Murphy, 2006:473)

science – derived from 'the book of nature' in the framework of natural theology (Moltmann, 2000a:64-5) – is a vital component in the search for holistic truth and reality.

Assessment

We have argued in this section that key mutual foundations underpin and provide a framework for both the scientific and theological endeavour. Wonder provides the initial motivation; desire for understanding and wisdom provides a unity of purpose in the search for truth; and the recognition of a single, unified reality perceived from multiple perspectives enables theology and science to share insights through the common approach of critical realism. These mutual foundations resonate closely and uniquely in these two disciplines, providing the necessary framework for dialogue, prompting an approach of resolution when faced with incongruities, and 'rejecting a "two-languages" account of science and theology which would maintain them in insulated isolation from each other' (Polkinghorne, 1995c:35). Recognition of these commonalities provides the basis for a dynamic yet harmonious and fruitful exchange of ideas, concepts, and theories, allowing each discipline to be influenced and 'made wiser' by the other, without impinging on their methodological autonomy. However, while these foundations make such dialogue possible, they do not tell us about the nature of that dialogue itself.

The Nature of the Dialogue

A vast amount of literature has been written on the relationship between science and faith, from historical, cultural, philosophical, methodological and linguistic perspectives.[62] Although well beyond the scope of this work to survey, the nature of the science-theology dialogue as it currently exists – and has been developed and employed in recent decades by those involved – is vitally important in establishing a recognised and acceptable basis

[62] Substantial works on the topic include: D. Alexander (2001), D. Alexander ed. (2005), Astley et al. eds. (2004), Barbour (1966, 1974, 1997, 2000), Barrett (2004), Brooke (1991), Carlson ed. (2000), Chapman (2013), Clayton (1997, 2008), Clayton & Simpson eds. (2006), Collins (2003), Dixon (2008), Dixon et al. eds. (2010), Dowe (2005), Drees (1996), Ferguson (2004), Fergusson (1998), Ferngren (2002), Fuller (1995), Giberson & Collins (2011), Grant (2004), Gregersen et al. eds. (1998), Harper (2005), Haught (2007), Jeeves (1969), Jeeves & Berry (1998), Küng (2007), Luscombe (2000), McGrath (1998, 1999, 2002, 2009a, 2016), McLeish (2014), Moltmann (2003), Murphy (1990), Olson (2004), Padgett (2003), Pannenberg (1988, 2008), Peacocke (1971, 1979, 1993, 2001), Pearcey & Thaxton (1994), Peters ed. (1998), Peters & Bennett eds. (2003), Plantinga (2011), Polkinghorne (1996a, 1998b, 2000b, 2011), Rae et al. eds. (1994), Richardson et al. eds. (1996, 2002), Rolston (2006), C.Russell (1985), R.Russell ed. (2004), Russell & Wegter-McNelly (2003), Schaeffer (2003), Stannard (1989, 2000), Steane (2014), Stenmark (2004), Straine (2014), Torrance (1969, 1985), Trigg (1993, 1998), Ward (2006), Watts (1998), Watts & Dutton eds. (2006), Whitehead (1967), Wiseman (2002), Worthing (1996).

of assessment for eschatological continuity and discontinuity. Barbour's ground-breaking publication (1966) established the framework still in use today (though debated and modified) for viewing science in terms of epistemology, language, and methodology. Critical realism largely covers the question of epistemology – summarised as 'epistemology models ontology' – but only provides an initial approach to methodology and the challenge of language (i.e. mutual means of expression).

The Current State of Dialogue

George F.R. Ellis speaks for those engaged in the dialogue when he extols the many benefits in both directions,[63] 'provided we reinforce the open-minded, nonfundamentalist [sic] tendencies on both sides' (2006:3). Both science and religion have deservedly been accused of dogmatism and hubris: in religion for claiming absolute truth rather than admit the fallibility or tentativeness of interpretation; and in science for 'imperialistic tendencies' and 'extremist claims…about the scope and implications of science', failing to recognise its limits and the boundaries of its domain' (Ellis, 2006:4). This is most conspicuous in the practice of methodological naturalism leading to reductionist denials of the full dimensions of human nature or the spiritual potential of the universe.[64]

A renewed awareness in science that observations, hypotheses, conceptual models, and experimental processes are in fact shaped by certain preconceptions, has brought science back into the orbit of other more open-ended subjective disciplines. Some of this development has come about negatively through a post-modern devaluation of objective truth replaced by a more accepted relativist view of individual perceptions and subjective participation. Emphasis on the role of subjectivity in scientific research has also contributed to a more 'level playing field' for science and theology, forging a common humility[65] in pursuit of a truth less certain or objective, but with greater emphasis on

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[63] Ellis (2006:3-24) lists numerous benefits of dialogue. Broadly these come under the umbrella of developing mature religious thought in light of modern scientific discoveries and enabling science to probe root causes, thus linking science to ethics, meaning, and aesthetics.

[64] Polkinghorne similarly speaks of the 'widely attested human experience of encounter with the sacred dimension of reality (2008:20). Philosopher Stanley Jaki (1993) critiques the failure to take seriously the presence of the universe as a totality, concentrating on fragments of physical existence while ignoring an indivisible entity that cannot be considered apart from divine reality.

[65] The theme of humility in both the scientific and theological endeavors has become prominent through the works of John Templeton (1981) and Robert Herrmann (2000).

probability and *reasonableness*.[66] Peacocke suggests a need for theology 'to develop the application of its criteria of reasonableness in a community in which no authority would be automatic' (1999:17). Polkinghorne is less convinced by the post-modern arguments,[67] but equally agrees the need for humility due to the subjective nature of *interpretation* of both scientific data and theological sources (2007:3). In the words of E.O. Wilson, 'Enlightenment thinkers believe we can know everything, and radical postmodernists believe we can know nothing' (1999:42). Current discourse believes we can at least know *something*, and on this level, new dialogue is taking place on several fronts.

This approach of constructive dialogue underlies a remarkable escalation in intellectual output in science-theology,[68] highlighting potential for further captivating insights to be gained by both disciplines. Welker concludes that 'a whole academic subculture has emerged' (2001:171). The trend toward mutual recognition and respect has tempered extremist tendencies in both disciplines, and topics of interest to realists in both fields are being discussed in an inter-disciplinary framework which takes seriously the contributions of both, raising interest in formulating holistic interpretations:

> Theology can take the insights of science and provide a wider and deeper context for them. Science can make the process and character of the physical world more intelligible and, by that, help theology to have a truer thought about the creation and the will of the Creator. (Polkinghorne, 1995e:26)

But Welker maintains that the great majority of these activities and discourses still remain *external* to both theology and science. They have not yet touched 'the cultural configuration in which we live and think' (2001:171). In other words, the achievements of dialogue have yet to pass the test of cultural relevance or yield results which have percolated into the general consciousness or challenged prevailing worldviews. The exception, he suggests, is where dialogue has shifted from theory to content, highlighting

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[66] This is not to suggest that reasonableness is a criterion for theory, but rather for a coherent relationship to truth. Neither quantum activity nor the resurrection may seem reasonable, but it is perfectly reasonable to suggest, based on the evidence, that both correspond to ontological reality. e.g. Polkinghorne (2011:18).

[67] Polkinghorne frequently emphasises the success of science: 'Repeatedly in science, questions actually get settled' (2011:2). Yet neither science nor religion has access to absolute truth (2008:xvi).

[68] Polkinghorne notes the continued intensification of productive activity (2004:4; 2006b; 2008:xi) as does Wilkinson (2010:5). Clayton (2006:63) highlights the 'explosion' and 'internationalizing' of global dialogue in the 1980s and '90s. Developments include dedicated science-theology journals; collaborative organisations and academic institutes promoting inter-disciplinary research, conferences and symposia; tertiary-level courses in 'science and theology'; and an outpouring of both academic and general interest literature in the field.

eschatology in particular – an exception of considerable value to this study, to which Polkinghorne readily agrees (2004:5).

Methods and Models of Interaction

The general nature of the discourse is characterized largely by which model of interaction is being used. Gregersen and Van Huyssteen refer to Barbour's fourfold taxonomy as 'one of the most enduring legacies of our "first generation" of scientist-theologians' (1998:3). Barbour's typological models include: *conflict, independence, dialogue* and *integration* (1997:ch 4).[69] These are primarily descriptive explorations of the types of interactions taking place at the time rather than detailed proposals for maximizing fruitful cooperation and mutual engagement. The conflict model (often 'warfare' model),[70] and independence model (or 'two-worlds' or 'two-languages' view),[71] have little value in this study except as reference points to the profoundly negative interaction still common in public discourse today. The conflict model remains noteworthy because of its enduring pervasiveness in the popular mindset,[72] a fact which will surface again in eschatological formulation.

The latter two options however depict an interesting differentiation. In the *dialogue* model according to Barbour, comparative interaction stems from the characteristics of the two disciplines at the level of presuppositions, limits, and methodologies; whereas in the *integration* model, the emphasis is on relating the content of specific scientific theories or theological doctrines. Barbour's own choice was the *dialogue* model with respect to methodology, and the *integration* model with respect to particular topics such as creation and human nature. With the advancement of critical realism, scientist-theologians have generally come to reject integration as a *model* (being largely unachievable), but

[69] The use of 'dialogue' here is confusing, since all models (even conflict) necessarily require dialogue to relate to others even in disagreement. The term functions much better as a category of interaction than a model (e.g. Stenmark 2004:253), but Barbour's typology is too well-established to dismiss.
[70] For history of the model: D. Alexander (2001:ch7), Chapman (2013), Lucas (2005), McGrath (1998:20-29), Murphy (1990), Numbers (2009), Stout (1981), Straine (2014:ch4). For current assessment: Alexander (1995), Plantinga (2011), Wilkinson (2005), Watts (1998). Peacocke (1999:16) lamented, 'Science *versus* religion is still regarded as a newsworthy sport' and… 'conflict' still endures in the popular mind.'
[71] Cf. Murphy (1996:158), Peters (1998:17). Stephen J. Gould's proposal of NOMA (non-overlapping magisteria) encapsulates this model (1999:6): The magisterium of science covers the empirical realm; the magisterium of religion covers ultimate meaning and moral value. These magisterial do not overlap.
[72] See Straine (2014:53-8). The trend toward 'militant atheism' in relation to popular science has a strong following and has enjoyed immense popularity, notably through the advocacy of Richard Dawkins, Christopher Hitchens, Daniel Dennett, and Sam Harris. Dawkins (2007:51) uses highly inflammatory language designed to offend and provoke controversy. McGrath (2007).

nevertheless to uphold it to varying degrees as an aspiration for dialogue. Since Barbour, others have suggested different category names or expanded the typology, emphases or descriptions,[73] producing at times 'a variety of contrasting views' (Polkinghorne, 2004:10), some even challenging critical realism. Polkinghorne contends that these philosophical issues around the term 'critical' suggest the need for a more carefully nuanced critical realism, not a departure (2004:10). Nevertheless, the descriptive models of the past have clearly proven inadequate for the needs of an increasingly complex and purposeful dialogue.

Toward a Model of Consonance

Several new models attempt to more carefully articulate the nature of the interaction in terms which provide guidelines, structures, develop concrete goals and objectives, and/or propel the dialogue toward philosophical objectives. Proponents are wary of moving too far in the direction of full integration, suggesting limits on the extent to which two distinct perspectives can or should be 'merged' even if they agree – as critical realism asserts – that a unified truth exists. Alan Padgett (2003) takes this cautious approach in his *mutuality* model, in which he carefully explains the nature of mutual interaction as 'different levels of explanation' while protecting the autonomy of, and distinctions between, the two disciplines. Philosopher Mikael Stenmark advances a *multidimensional* model which enables a dynamic and evolving relationship between science and religion. This innovative construct aims to take into account four different dimensions of science and religion (the *social, teleological, epistemological-methodological,* and *theoretical*) in order to understand and relate each dimension discretely within a framework of overarching complementarity (2004:267-8). Perhaps the most technically advanced proposal is Russell's *creative mutual interaction* model (CMI),[74] which recognises the importance of a continuous reflective interaction between theology and science involving aspects of both consonance and dissonance (2008a:1-24).

[73] Cf. Willem Drees's *conflicts, separation, partial adaptation, integration* (1996:45), Richard Carlson's *creationism, independence, qualified agreement, partnership* (2000), Haught's *conflation, conflict, contrast, contact,* and *confirmation* (2007:116-32), Peters' options (1998:13-22), or Stenmark's *independence, contact,* and *monism* (2004:9). See Gregersen and Van Huyssteen eds. (1998).
[74] CMI shows a complex interaction represented diagrammatically through eight distinct pathways taken by scientists and theologians connecting criteria, theory, data, philosophical assumptions, observation, models, beliefs, interpretation and hypotheses.

In many of these models, the word *consonance* is preferred as a descriptor. Russell traces the concept of consonance to Ernan McMullin's (1981) concern for 'a "coherence of world-view" to which all forms of human knowing can contribute' (2004:49). But he develops it further by combining consonance with *dissonance* in a metaphorical structure which provides a way to assess problem areas where potentially greater coherence can be sought (2008a:12).[75] Peters suggests a move toward 'hypothetical consonance', where in the strong sense consonance represents complete accord or harmony (which may be desirable but unobtainable), but in its weak sense represents 'shared domains of inquiry' which propel further cooperative exploration (1988:274-6). In critique of Barbour's taxonomy,[76] Polkinghorne prefers the terms *consonance* / *assimilation* over *dialogue* / *integration,* seeing these not as discrete positions but lying along a spectrum of constructive interaction, with *consonance* (in the weak sense) delineating one end and *assimilation* as its counterpart at the other. He locates his own position 'near the conceptual autonomy (consonance) end, Barbour near the integrationist (assimilation) end, and Peacocke somewhere in between' (1998c:63; 1996a:ch7).

Polkinghorne may well understate his own tendency toward integration, or at least his ability to articulate compelling approximations of unity. His wariness of moving further along the spectrum can be attributed to a suspicion that a stronger attempt to merge the two disciplines 'tends to result in science playing too great a controlling role in the proposed convergence [such that] theological concerns become subordinated to the scientific' (2004:9). This is certainly a legitimate concern – and for this reason he applies the more negative word assimilation – but it begs the question whether, if this concern were alleviated, he would in fact opt for a closer convergence. He does in fact propose finer distinctions related not only to method but to the content of topics entering the dialogue (2004:10-11).[77] But these are differences of degree rather than of kind, and the models proposed above all fit comfortably along this spectrum. The idea of *consonance* allows a degree of accommodation toward each topic within the dialogue, without imposing one particular model universally.

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[75] This arises from 'the Ricoeur/McFague understanding of metaphor' (Russell, 2008a:12).

[76] See e.g. Polkinghorne (2004:ch1), (2011:20-25).

[77] These include four categories: *deistic, theistic, revisionary and developmental*. See also Clayton (2008:54-5).

Limitations & Challenges

We have argued thus far that an inter-disciplinary engagement is desirable (for seeking truth), possible (through a common adherence to critical realism), and potentially fruitful (using models which promote equitable dialogue with the aim of attaining consonance). It is equally important however, to recognise the implicit limitations and challenges of the science-theology dialogue if such engagement is to bear positive and well-attested results.

A) Methodological Differences

Science and theology are discrete, often incongruous endeavours. Polkinghorne maintains, 'if science is human reflection on impersonal encounter with the physical world, theology is reflection on transpersonal encounter with the sacred reality of God' (2011:12). This stark contrast is reflected in their distinct methodologies, particularly in the nature of critical examination relating to theories of knowledge (Sklar, 1995).[78] One potential barrier to fruitful science-theology dialogue is the presumption of naturalism in science and the problematic application of *methodological naturalism* in dialogue.[79] The central emphasis on observing nature or the 'physical world' – a defining characteristic of modern science – has not only produced extraordinary results but precipitated a marked shift toward philosophical naturalism. D. Alexander identifies this as: 'the view that only scientific knowledge is reliable and that science can, in principle, explain everything' (1999:1). He gives a pointed critique of such scientific naturalism as self-refuting, self-defeating, and exclusionary. Its methodology asserts that 'What is beyond the scientific method is beyond rationality' (Heller, 2005:40). Moreland points out that it not only erects a barrier to dialogue but limits science itself to a restrictive framework where questions of ethics, origins, aesthetics, or metaphysics simply have no meaning (Moreland, 1994).[80]

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[78] Even the word 'science' is perceived differently in its narrow post-enlightenment correspondence to 'natural sciences' in English compared to the broader 'area of study' in Europe (McGrath, 2004:22). This difference can be seen in Moltmann's use compared to Polkinghorne's and Anglo-American contemporaries.

[79] Haught sees naturalism as 'the dominant belief system in scientific and philosophical circles' (2007:133). Cf. Ratzsch (2000:122). Several related terms are also in use: physicalism, materialism, empiricism, metaphysical naturalism, and scientism, each with subtle distinctions, but for present purposes equivalent.

[80] Meyer (1994:17) counters that naturalism is itself irrational as it closes off legitimate lines of truth inquiry. Concluding that it is built on a very weak philosophical foundation, he suggests naturalism could end in the trivialisation and 'death' of science. Cf. Fowler (2007).

Polkinghorne contends that science aims to gain a reliable and insightful understanding of the physical world 'within the defined limits of a well-winnowed domain' (2007a:2). The 'domain' of scientific inquiry has been carefully delineated as the physical world, but the success of science in describing that world (i.e. from the immensity of the universe to the quantum realm of particle physics) has resulted in a powerful tendency toward viewing the physical world as *the* world - the totality of all that exists or can be known. From this perspective, science is presented as the triumph of human reason based on observation and experiment over faith and superstition (Kennett, 2003:2). Michael Heller gives a particularly cogent example:

> When doing science one investigates the Universe. This statement is almost tautologically true because the Universe can be defined as the totality of things that are investigated in the process of doing science… In this sense the limits of the scientific method are the limits of the Universe. Everything that transcends the empirical investigation transcends, from the very definition, the Universe of the sciences.' (2003:29; cf. 1993:91ff).

The physical universe becomes '*the* Universe', with no place for God, heaven or any metaphysical reality. Wilkinson (2010) provides a rare exception to the pervasive tendency to speak of the universe without qualification, often assuming complete correspondence with reality while disregarding the limitations implicit in science itself.

Closely related to this methodology is *reductionism*,[81] an important concept in the natural sciences but often over-extended. It implies that complex phenomena can be explained in terms of simpler components (Griffiths, 2002), or as Steane explains, 'the idea that a whole can be understood completely as the sum of its parts' (2014:75). But these two descriptions are noticeably different. As an explanatory method, reductionism is an important research strategy in science, yet as a philosophical ordering principal, as Murphy points out, 'there is a crass materialism built into the reductionist orthodoxy. If the complex wholes are really nothing but the sum of their parts, then to be is, ultimately, to be material' (1998b:104). Reductionism has been enthusiastically promoted as a means of unifying the sciences, by demonstrating that each science can be reduced to the one below;[82] but when it becomes a philosophical principle of completeness, it leads to far-

[81] For deeper discussion on reductionism as both method and philosophy, see Barbour (2000:108-11), Griffiths (2002), Holder (2008:ch5), Murphy (1998), Steane (2014:ch4.2).

[82] The idea is that the sciences can be ordered in a downward hierarchy, with greater complexity explained by lower-level simplicity. Sociology can be explained by psychology, psychology by biology, biology by chemistry, chemistry by physics. Physics deals with the smallest and simplest components of the natural world, so ultimately everything is explainable by physics. This constitutes a 'radical reductionism' (Fowler: 2007:6).

reaching – yet demonstrably false – conclusions.[83] Barbour helpfully distinguishes between *methodological* reduction (which he accepts), and *epistemological* and *ontological* reduction (which he rejects) (2000:108-9; cf. Holder 2008:ch5). Science-theology dialogue must guard against the easy slippage from one to the other.

Both naturalism and reductionism have too often been employed to raise science to a superior status: 'the belief that science is the only worthwhile source of knowledge and that it is of itself enough' (Polkinghorne, 1996:3). In contrast, Polkinghorne views the limits of the scientific endeavour in a highly positive light, claiming that, 'science has purchased its success by the modesty of its exploratory and explanatory ambitions' (1996:3). In opposition to reductionism (2005b:77) he endorses a 'bottom-up' truth seeking strategy (2000c) in which science may deliberately bracket out questions of meaning, value and purpose – yet contribute its findings to the larger quest for truth in response to those questions. Science is principally concerned with investigating the dimension of 'impersonal encounter' with reality. 'It is this self-defining limitation to impersonal experience that has given science the great secret weapon of experiment as its unique means for attaining intersubjective agreement' (2011:3). Fruitful science-theology dialogue should therefore not be constrained by methodological naturalism or reductionism as this would be contrary to its broader aims;[84] it must also be wary of their subtle or unobtrusive entry into the dialogue, if the two disciplines are to retain an equal footing.

B) Progressive Versus Expansive

A second important difference lies in the very nature of the two disciplines: science is progressive (or cumulative), whereas theology is expansive. New theories in science supplant the old, as further information comes to light: Polkinghorne explains:

> '[Science] is a linearly progressive discipline in which knowledge and understanding accumulate from generation to generation… In religion… there is no presumption to be made of the superiority of the present over the past… theological thinking has to be prepared to span the centuries in a way that is not paralleled in science.' (2011:13-14).

[83] Steane makes a strong statement along these lines: 'Reductionism has been converted into an untruth whenever it is interpreted to mean that the lower level description can stand alone as the whole truth of things' (2014:80).
[84] See e.g. the cautionary appeals of Padgett and Plantinga in Hoezee (2003:16-17).

The progressive nature of science relates closely to the concept of *convergence*, the claim that 'scientific theories in their historical order are converging to an ultimate, final, and ideal theory' (Sklar, 1995:610). This can be understood in realist terms as an increasing correspondence to reality, but in pragmatist terms this goal becomes 'the defining standard of truth' (Sklar, 1995:610). The quest for a so-called 'Grand Unified Theory' has long been a driving motivation in modern physics (Polkinghorne, 2007a:97ff).[85]

Theology in contrast does not develop by convergence.[86] 'Each generation has its own experience of God and its own insights into the divine nature, but there is no presumptive superiority… that is why theologians maintain a constant dialogue with the past' (Polkinghorne, 2000:39). 'Theology's anchorage in human encounter with the divine means that it is more sensitive to experiential context than is the case for science' (Polkinghorne, 2011:14). Theology is always contextual, articulated in a particular culture and language, rooted in history. Clearly theology is not static, but rather than progressing linearly, theological understanding grows expansively. The new does not replace the old, but refers to new ways of understanding, new interpretations, new reflections on convictions which remain embedded in the paradigm of the community of faith. This begs the question whether theology even accepts the possibility of converging toward a greater understanding of truth.

Polkinghorne suggests that the theological counterpart to a Grand Unified Theory is the doctrine of the Trinity (2007a:99).[87] The truth-seeking venture of theology is not then a convergence toward its discovery, but rather growth in understanding new facets of our human relationship to the trinitarian God. *Convergence* occurs horizontally in the relational understanding between revelatory and natural theology, where the insights of science are a major contributing factor. The science-theology discipline might itself be treated as a form of contextual theology such that dialogue 'can rightly seek to contribute to creative theological thinking itself, in complementary relationship with other forms of contextual theology' (Polkinghorne, 2008:xiii). Science is more readily adaptable to new ideas, concepts, theories, and knowledge. Theology, while not antagonistic to innovation, requires those new concepts be structured within the framework of a pre-existing

[85] The GUT quickly slips into naturalist terminology as a 'Theory of Everything' (TOE).
[86] See also Polkinghorne (2000c:957)
[87] Polkinghorne here echoes Pannenberg's comprehensive Trinitarian outlook. See I. Taylor (2007).

historically established canon of truth. Its concern is how theoretical innovations might fit within a relational ontology including God, the universe, and ourselves.

C) The Personal and the Impersonal

A third difference between the disciplines revolves around the claim that science is objective while theology is subjective.[88] Barbour rejected such a stark contrast in science, opting for a modified stance which recognised 'the *contribution of the scientist* as experimental agent, as creative thinker, and as personal self' (1966:176). Referring to the well-established paradox of Heisenberg indeterminacy entangling the observer in the process of measurement, Barbour extended this to larger systems as well, positing that 'there is no simple separation between observer and observed because one deals always with *relationships* and *interactions* rather than objects in themselves… a strictly independent object can never be known' (1966:178). Furthermore, both the experimental process and the assessment of theories and data are guided by the personal judgement of the scientist.[89] Barbour did not wish to discard the idea of objectivity, but to reformulate it with regard to the contribution of the subject; he reinterpreted objectivity as *intersubjective testability*, recognising the participation of the observer in all inquiry (1966:177, 203).[90]

On a scale of subjective participation theology ranks far higher, but this Barbour considered a difference of degree, not of kind. Polkinghorne essentially agrees, but emphasises the contrast:

> [Science] restricts itself to the realm of the impersonal, where reality is encountered as an "It," an object that can be manipulated and put to the empirical test… Much has been learned in this fashion, but we all know that there is another dimension to our encounter with the world, in which we meet reality personally – as a "Thou" and not as an "It," – and where true knowledge can be found only through trusting rather than through testing. Religion operates in this latter domain. (2006b:42).

[88] Keith Ward states the normative view: 'The exclusion of the personal from nature is a methodological axiom of science' (2006:116).
[89] This is highlighted by Polkinghorne (1986:12) in the work of Michael Polanyi.
[90] For an extensive treatment of the concept of intersubjectivity see Bracken (2009). Cf. Polkinghorne (1996b:57-8).

In what sense then is theology objective? In source material (data), Christian theology has objective starting points which it relates to the concept of revelation.[91] Revelation is seen in two primary forms: God's word, and God's world.[92] The latter has the most direct correlation to science (as 'natural theology') yet is less considered theologically.[93] The former (the Bible), testifies to the person of Jesus Christ, the 'living word'. It is here in Christ's incarnation, life, death and resurrection that we find the objective locus of theology; not the mysterious, invisible, transcendent God, but God revealed visibly in human form and human history. Christology brings theology into relationship with the scientific domain.

Even considering these objective starting points theology remains a highly subjective (or intersubjective) process of encounter and reflection. But theological activity is neither purely personal nor without marked boundaries. It is interpreted within a community of faith, with strictures imposed by that community – in terms of creeds, doctrines, and traditions – and by the authority vested in the Bible and the Church. Theological reflection, while subjective, carries weight only insofar as it conforms to the limitations of communal acceptance or 'orthodoxy'. Polkinghorne self-consciously adopts the Nicene Creed and its trinitarian structure as the framework within which he locates his own theological thinking (2000c:957). As in science, the limitations of theology's domain are not absolute but are constantly challenged by new reflection. Interpersonal and subjective reflections are therefore interpreted into a framework which carefully maintains an objective of truth.

D) Data and its Interpretation

The previous section has raised the issue of source material and 'data'. The source material of science is, in broadest terms, the physical universe, hence scientific data relate

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[91] Revelation in Christian tradition is a complex and highly nuanced concept, but for simplicity we need only mention the primary modes of revelation. For more extensive discussion: Dulles (1983), Erickson (1985:ch7-8), McGrath (1998:84ff), Moltmann (2000a), Yarbrough (2000).

[92] The 'two-books' tradition of 'God's word and God's works' has a long history at least to Pelagius (5th C.) but usually credited to Francis Bacon (16th C.) (Berry, 2003:32-5); Cf. Hess (2003), McGrath (1999:141-2), Peters and Hewlett eds. (2003:18).

[93] Natural theology has had a chequered history but is enjoying a contemporary resurgence as a quest for meaning in a universe which gives evidence of order and design. McGrath describes it is 'one of the most exciting and interesting aspects of contemporary Christian theology', with potential to illuminate the science-theology dialogue (2009a:1). McGrath is one of the foremost proponents of this renewal, e.g. (2001; 2008; 2009b). Cf. Wright (2019).

to the observation and measurement of its physical phenomena.[94] As Polkinghorne frequently states, the great success of science is largely due to its capacity for experiment and the repeatability of its findings (2008:xviii). Not so in theology. We have identified theology's source material as God's word and world, but the operative word is *God's*. The 'data' of word and world are understood *in relationship* to God and can only be fully interpreted through this interpersonal encounter. This does not easily lend itself to either experiment or repeatability – although the shared experience of the community of faith potentially builds consensus similar to that in science (Polkinghorne, 2011:3). As theology re-interprets in each new context the already interpreted 'data' of the Bible, the caricature of biblical revelation as propositional statements to be accepted by faith must be discarded in favour of what Polkinghorne describes as 'the indispensable record of foundationally significant human encounters with sacred reality' (2008:xvi).

Biblical data is as vital in theology as observational, experimental and measurement data are in science. The difference is that the raw data of science is mainly unintelligible to the non-specialist and must first be interpreted into human language to give it meaning. With rare exceptions, experimental repeatability ensures – through the arduous self-correcting process of investigation and confirmation (Holder, 2008:35-8) – that scientific statements have the consensus of the entire scientific community, and thus a presumptive authority. When a scientist expounds on the nature of well-known physical phenomena, there is no need to question whether the statement is merely one of personal opinion. In the science-theology dialogue, the contributions of science are unquestioned at this data-based level of interpretation – but the dialogue itself takes place at a higher metaphysical level of meaning.

Theology on the other hand relies on revelatory data which is linguistically accessible to anyone,[95] and has a far greater capacity to be interpreted differently by specialist and non-specialist alike, even more so over changing times and contexts. This does not imply that any interpretation is equally valid – critical methods and historical consensus are powerful factors – but theology is neither as uniform nor authoritative in data interpretation as science. In practical terms (at the data-interpretation level), science is

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[94] See Polkinghorne's explanation (1988a:19). Keith Ward points out there is other data which is understood to be real, but is not observable and thus not accessible to the natural sciences (2006:ch9).

[95] See Polkinghorne's more extensive treatment on biblical revelation: (2010a:ch1).

rarely open to questioning by theology in the way that theology is open to questioning by science. At the higher level of dialogue, this can easily be seen as a disparity.

Nancey Murphy argues that 'theology differs only by degree from science – science can be confirmed by data that are more precise than the data supporting theology' (1996:151). She further claims that 'theology is a science-like discipline whose object is God' (153). Murphy distinguishes between what theology is *about* (its 'referent'), and its *source*; the referent of theology being 'God and God's relationship to all that is' while the source of theological knowledge (its data) is the 'lived experiences of the human-being' (1996:152). While this distinction is useful, it does not explain how the data of lived experience differs only by degree from science. Rather, it highlights the personal versus impersonal differences. Her key point however is that 'facts and meanings cannot be neatly separated. If theological meanings are not grounded in theological facts – facts about the character and acts of God, in particular, then they are mere fairy tales' (1996:153). I suggest that Murphy is in fact pointing out the critical relationship between theological interpretation and the theological data (i.e. historical and propositional 'facts') of Scripture.[96] But while Scripture undoubtedly contains these facts, they are presented within the subjective framework of the 'lived experience' of a particular people in a particular context – and therefore in need of a particular type of historical-contextual interpretation (i.e. biblical theology).

I suggest a division of levels in data and interpretation may be helpful:

	Science	Theology
Level 1 - Data	Experimental 'raw' data *Specialist use only*	Textual data in original languages *Specialist use only*
Level 2 – Data-based Interpretation	Data-based statements and theory *Specialist consensus* (mainly closed to non-specialist questioning)	Textual data (bible) translated into English *Mixed consensus on data and meaning* (open to non-specialist questioning)
Level 3 – Metaphysical Interpretation (Dialogue Level)	Metaphysical proposals – *science based* truth, value, purpose, significance (open to questioning)	Theological interpretations – *combined text and natural theology based* truth, value, purpose, significance (open to questioning)

The purpose of this diagram is simply to illustrate how data-based interpretation is open at the biblical level (Level 2) in theology, but not in science. This is not absolute, and

[96] Cf. Murphy (1994:107ff) on data for theology.

there are exceptions, but the Bible is essentially open and accessible to all.[97] Data-interpretation discourse is open in three areas, not just two, an important consideration for the science-theology dialogue at the metaphysical level (Level 3). While science's Level 2 contribution to the dialogue is accepted as authoritative and highly significant, theology's unique Level 2 contribution (the biblical text itself), is often neglected.[98] It is ever implied, but rarely examined thoroughly within its own particular context, taking seriously the insights of culture, language, history, and hermeneutics. The risk is that the science-theology dialogue engages deeply with philosophical and systematic theology but with little reference to the critically important component of biblical theology.[99] Polkinghorne refers to 'the indispensability of the role of scripture in the task of theology' (2004:37). For this reason, Wright's contribution to the dialogue is vitally important.

The Language of Dialogue

Recalling Barbour's framework of epistemology, methodology, and language, we turn now to issues involving the language of dialogue. If there is truth in the claim that mathematics is the language of science, and imagery and metaphor the language of theology, how is dialogue possible when the disciplines express themselves in such dissimilar ways? Is there a mediating language they share in common? Furthermore, language is both fluid and imprecise; what might *resurrection* mean to science, or *quantum entanglement* to theology? What do *body* or *soul* mean in either? Michael Fuller argues that science and faith use different vocabularies (1995:112).[100] This section will provide a brief look at the ways each discipline uses language, with a view toward identifying a linguistic framework for dialogue.

A) Mathematics – the Language of Science

The language of mathematics may seem unintelligible and irrelevant to theology, yet mathematics is, to a large extent, the language of science, and cannot be neglected in the

[97] This of course does not imply that the textual data is uniformly understandable. As a hugely diverse body of literature, some aspects require far more specialist interpretational skills than others, but the data itself is not the preserve of professional theologians.
[98] Polkinghorne points out that the Bible has a special role in the science-theology dialogue, but rarely evident. The tendency is to rely on its ideas, with little overt reference or extensive engagement (2004:34). This reflects the approach to Scripture from both scientists *and* theologians in the dialogue.
[99] Wilkinson, noting the growing number of works on eschatology in the dialogue, points out that 'none of these publications engage at depth with the biblical data' (2010:5). Polkinghorne explores the 'risks' for theology of neglecting the careful and scholarly investigation into its central texts' (2004:ch2).
[100] Barbour sets out the foundations for the claim of two incompatible languages (1997:87-9).

science-theology dialogue.[101] The question of how mathematics – as a highly rational and abstract discipline – relates to theological thought about God and the world is an important one, but the same could be asked of its relationship to science. Einstein pondered this very question:

> How can it be that mathematics, being after all a product of human thought which is independent of experience, is so admirably appropriate to the objects of reality? Is human reason, then, without experience, merely by taking thought, able to fathom the properties of real things? (1922:28)

Eugene Wigner's renowned article '*The Unreasonable Effectiveness of Mathematics in the Natural Sciences*' maintained that mathematical formulations and concepts have applicability far beyond the context in which they are formulated - yet he could offer no explanation.[102] He described it as the scientist's 'article of faith'. 'The enormous usefulness of mathematics is something bordering on the mysterious… there is no rational explanation for it' (in Pearcey and Thaxton:159).

This mystery still bemuses scientists today. Polkinghorne asks, '*Why* is mathematics the key to unlocking the secrets of the physical universe?' (1995e:14). He points out the deep-seated relationship between the reason within us – that is, the mathematical explorations of our minds – and the reason outside us, the rationally beautiful and transparent order of the physical world in which we live (1995e:15).[103] As Einstein famously mused, 'the most incomprehensible thing about the universe is its comprehensibility'.[104] Polkinghorne notes that many of the most beautiful patterns mathematicians conceive are later found to occur deep in the structures of the physical universe, citing Dirac's theoretical equation later shown to correspond to properties of the electron.[105] Searching for beauty becomes part of the method itself: 'If one is working from the point view of getting beauty in one's equations, and if one has a really sound instinct, one is on a sure line of success' (Dirac in Ferguson 2004:60). 'Beauty', as Kitty

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[101] Polkinghorne calls mathematics 'the natural language of physical science' (1986:25); Cf. Voss (2005).
[102] At issue is why abstract mathematical concepts should inexplicably correspond to the real world. The mathematical formulation for gravity for example, was discovered to apply perfectly to the rotating spheres in the cosmos. Cf. Barrett (2004:128-9).
[103] See Polkinghorne's 'mathematical postscript' (1998a:ch6). The ambiguous links between reason/rationality in both religion and science have been well documented (e.g. Trigg, 1993; 1998). Science and religion both presuppose the order and rationality of the world – otherwise science would be meaningless.
[104] Translated more accurately from Einstein's original 1936 essay: 'The eternal mystery of the world is its comprehensibility... The fact that it is comprehensible is a miracle.'
[105] See Polkinghorne oft-cited example of Dirac's 1928 equation (1986:24). He ascribes Einstein's discovery of general relativity and Dirac's of antimatter as the 'successful pursuit of mathematical beauty' (2000e:944).

Ferguson points out, 'is a subjective matter – in the eye of the beholder, we are told… But beauty is a familiar pointer in physics' (2004:60).[106]

Polkinghorne concurs: 'The search for beautiful equations is a powerful technique of discovery in fundamental physics because time and again the physics community has found that it is only beautiful mathematics that provides theoretical insights of proven and long-lasting fruitfulness' (2000e:944). Yet as Ellis points out, beauty is outside the domain of scientific inquiry. 'No scientific experiment can determine that something is beautiful or ugly, for these concepts are not scientific. The same is true for metaphysics and meaning' (2006:18). Science is self-limiting in this regard.[107] How then can beauty relate to science? Wigner's 'mystery' is far less mysterious from a theological perspective. Polkinghorne asserts that theology offers an intellectually coherent and satisfying response. 'The universe is shot through with signs of mind just because it is a creation, reflecting the Mind of the Creator, and we are joyfully able to discern that this is so because we are creatures made in the Creator's image' (2000e:945). The world is intelligible to human reason precisely because there is a Creator whose reason or 'logos' is behind that world.[108] Such a claim was academically unacceptable prior to the emergence of a strong science-theology dialogue, as the history of the philosophy of science shows.[109] But Gödel's incompleteness theorem showed that provability was a weaker notion than truth; no longer could theological assertions be considered 'inferior to their mathematical description' (Pannenberg, 1991a:39). The rational and the aesthetic are elements of both.

[106] Beauty in mathematics is such a significant concept that numerous mathematicians and physicists give it special note: Ferguson (2004:60) mentions Hardy, Weinberg, Gell-Mann, Wheeler; see also McGrath (2016:10), Polkinghorne (1994b:229; 2009a:114). Agnostics Hawking (1988) and P. Davies (1992) are unable to ascertain the beauty and order in the cosmos without reference to 'the mind of God'.
[107] Philosophers of science point out that science is self-limited to physical phenomena. Statements of interpretation relating to beauty, ethics, truth, etc. in fact move into metaphysics and other domains. See e.g. Ellis (2000; 2006), Lennox (2019), Schaefer (2003:73), Trigg (1993), Ward (2006:ch9).
[108] Trigg claims that human reason itself must be grounded in the rationality of the Creator (Trigg, 2007). Heller explores the relationship between rationality and the Christian idea of 'logos' (2003:ch6).
[109] According to MacCormac (1976:2), 'Scientific terms were precise and rational in the sense that they could be expressed in logical propositions.' Such propositional logic required the language of mathematics. This criterion was applied critically against religion with disastrous effect, but reassessed through philosophical discourse on Gödel. Cf. Pannenberg (1991a:38-9), Murphy (2006b). Polkinghorne (1986:25), Stiver (2001:43).

B) Metaphor, Model, and Imagery – The Language of Faith

Religious language is notorious in its use of imagery. Symbolism, metaphor, analogy, allegory, and other linguistic devices are inherently necessary to capture something of the aura, mystery, and transcendence of God in relation to Christian experience and practice. 'All, or almost all, of the language used by the Bible to refer to God is metaphor' (Caird, 1997:18). This involves a process of creative interpretation both similar and dissimilar to the interpretative processes of science.[110] Paul Ricoeur (1974:12) critically developed the vital role of symbolism in language and hermeneutics,[111] but the purpose here is simply to show that the ways in which science and theology use imagery are, to some degree, compatible, and that both disciplines employ such imagery in the interpretative process. Metaphor and model will suffice here as "umbrella" terms encompassing various forms of imagery in both disciplines.[112]

Barbour (1974) likened the application of analogical models and metaphors in both science and theology, thus diminishing linguistic distinctions:

> [Models] are open-ended, extensible, and suggestive of new hypotheses… such models are taken seriously but not literally. They are neither pictures of reality nor useful fictions; they are partial and inadequate ways of imagining what is not observable. (1974:47-48).

This was in stark contrast to positivist approaches of the time. Anders Jeffner (1972) identified as the central hermeneutic issue 'the problematic set of religious sentences' which have the linguistic shape of statements, but no means of empirical verifiability.[113] Barbour argued that verifiability was not the proper concern, but rather intelligibility; the problem for the critical realist is one of interpretation and meaning. Nevertheless, Jeffner

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[110] Wilkinson agrees with Polkinghorne that 'a degree of creative imagination' is needed in constructing theories (1993:63). Theories often precede, and only later are confirmed by experiment. Cf. Pannenberg (2001:784).

[111] The enormous contributions of Hans-Georg Gadamer and Paul Ricoeur to philosophical hermeneutics are beyond the scope of this study, but Ricoeur's contributions on the ontological nature of metaphor is especially valuable in seeing metaphor as 'the *redescription* of reality' (McFague, 1982).

[112] Caird adds several other types of non-literal speech in the Bible: hyperbole, litotes, irony, synecdoche, metonymy, periphrasis, and legal fiction (1997:131-143), but places all of these under the general umbrella of metaphor. MacCormac adds *myth* (1976:102), which Caird regards as a specialised kind of metaphor. Cf. Soskice on metaphor (1987:15).

[113] Examples include any sentences with referent localization outside of what he calls the 'real world': 'God created the world'; 'An angel visited the Virgin Mary'; 'Christ was dead but arose again'. Jeffers (1972:ch2).

posed an important question: Does any theory of metaphors, symbols or analogies solve the problem of religious statements?

'The central role Barbour gave to metaphors, models, and paradigms in both science and theology has stimulated wide discussion' (Russell, 2004:48).[114] In science, the term *model* is much preferred, though often paired with metaphor in the language of science-theology dialogue.[115] Though regarded as 'partial and inadequate', their purpose is to tell as true a story as possible, using interpretative language to represent reality consistently and meaningfully. (Peackocke,1999:16-17). 'Both disciplines… use metaphorical languages and models that are revisable in the light of experiments and experiences' (Peackocke, 2004:416). But Soskice argues that metaphor is 'a *speaking* about one thing or state of affairs in terms suggestive of another; a model need not be linguistic at all' (1987:101), a distinction Polkinghorne also asserts.[116] Metaphor then is a linguistic category, whereas model is defined by its *use* and usefulness. Soskice concludes that comparing models and metaphors is legitimate within critical realism but 'only if it goes beyond the comparison of superficial similarities to a consideration of the nature of explanation in the two domains' (1987:107).

Yet their distinction is valuable. In science, models assist comprehension and stimulate discovery and are successively replaced (Russell, 2004:49). In theology, metaphor is crucial to theological thought and metaphysically necessary; a theologian cannot operate without them.[117] Furthermore, metaphor and model in theology operates *relationally*. McFague suggests that theology is in fact dominated by one 'root-metaphor' from which all others derive. This is the metaphysical model of relationship between God, human beings, and the world. 'This "model of models" is understood as a cosmic, metaphysical drama of relationships... which includes everything that exists. Whatever is, *is* only in relationship to God' (1982:104). Theological models thus have a powerful and emotive effect on those who hold them, evoking deeply personal responses (Polkinghorne,

[114] Many other authors in the science-theology dialogue have taken a substantial interest in the nature and application of model and metaphor: Barbour (1997:ch5), Jeeves & Berry (1998:ch4), McGrath (1999:162ff; 2016:ch7), Polkinghorne (1996:19-25; 2011:19), Russell (2008a:10).
[115] McFague does not draw a sharp distinction between metaphor and model, but refers to models as 'substantive, organizing metaphors' (1982:65). Cf. MacCormac (1976:73), Soskice (1987), Fuller (1995).
[116] Polkinghorne strongly differentiates between model and metaphor. 'Models are prosaic devices aiding investigation… metaphors are allusive literary devices that illuminate a situation' (1996a:19).
[117] McFague states, 'It could be said that religious language consists of nothing but metaphors and models, and theological language is rife with them' (1982:105).

2007a:13). Scientific models, though incomplete and impermanent, are also deeply meaningful to those adopting them. There may be a choice as to which model is used, but not about using one at all.[118] The inability to model precisely what an electron 'looks like' does not make it any less real. Nor does our inability to fully conceptualise God make God any less real. The fundamental relationality modelled in quantum physics has enabled Polkinghorne to assert science's discovery that, just as in theology, 'reality is relational' (2009a:116).

C) The Unique Language of Eschatology

As the focus of this study, the language of eschatology merits special treatment due to its complexity and extraordinary use of imagery. Competing elements of present and future, individual and corporate, realised and expectant, create a mosaic of symbolism, patterns and imagery with multiple applications that defy definition.[119] This is exacerbated by the prevalence of apocalyptic language with referents from diverse background sources. Caird calls eschatology a 'metaphor system' for the theological interpretation of biblical events. The element of *future* fulfilment adds an interpretive component not found in the general usage of theological imagery. Not only are the 'new Jerusalem' and 'new heaven and new earth' modelling the unobservable, but the unobservable *future* as a teleological fulfilment of a present reality.

In spite of these significant challenges, Polkinghorne and Welker see eschatology as the most potentially fruitful arena for science-theology discourse (2000:7). For Welker, eschatology enables science to break free from the paradigm of naturalism. 'The boundaries of naturalism have to be grasped and cautiously extended. Both *continuity and discontinuity with the natural world* have to be conceived with regard to the eschatological realm' (2001:172).[120] Welker suggests that eschatological symbols and metaphors have the capacity to link concepts of future transformation to past and present dimensions of human experience. Bauckham speaks of the re-emergence of the role of 'imagination' in both science and theology, suggesting that nowhere is this case more

[118] As Polkinghorne explains, electrons may be modelled as waves or particles, but they *are* neither. The quantum world does not behave in any way commensurate with our experience of nature (2007a:74).
[119] Caird identifies at least eight different definitions of eschatology including: individual, historic, consequent, realised, existential, inaugurated, newness and purpose. He concludes, 'at this point our semantic confusion is almost complete' (1997:255).
[120] Polkinghorne is in full accord with this view, noting the great value of science-theology interaction in discussing the significant interplay of continuity and discontinuity in eschatology (2002a:xix).

clear than in eschatology. Christian hope is 'inspired and directed by *the* event of eschatological promise: the resurrection of the crucified Jesus… Eschatological imagination is Christologically and scripturally disciplined imagination, not free-floating speculation' (2008:681). Both mathematics and eschatology rely on concepts, pattern and symbols to describe a reality not empirically observable, yet ontologically 'real' (Polkinghorne and Welker 2000:3-5), suggesting that the languages of science and faith may not be so dissimilar after all.

Conclusion

This chapter argues that an interdisciplinary dialogue between science and faith is not only possible, but absolutely necessary for the exploration and discovery of deeper insights into the nature of reality not fully accessible or intelligible to either discipline independently. This is possible because the two disciplines share critical and indispensable foundations. Those foundations however do not provide a clear pathway to dialogue. An intentional engagement in constructive and fruitful discourse requires agreement on key issues and preliminary conditions, as well as the restriction of methodological differences which could severely limit the potential for dialogue. Where a direct engagement between science and theology would encounter significant barriers, interdisciplinary interaction takes place at higher level where the contributions from both are received and utilised in a common pursuit of truth. Increasing sophistication of this engagement and progressive developments in the structure and model of dialogue have evolved to create a unique science-theology field, related to but not encumbered by each parent discipline.[121] Polkinghorne suggests this fits the category of a contextual theology.

The preferred approach to dialogue is *consonance*, with the aim of achieving a high degree of accommodation without targeting complete integration. Consonance employs the twin criteria of intelligibility and coherence in its truth-seeking endeavour. Underpinning this is the principle of critical realism and the assertion that epistemology models ontology in relation to a single objective reality. Theology must expand its reservoir of data to include the extraordinary insights of science regarding an evolutionary universe, and science must be open to a meaningful, teleological account of

[121] Already by 1998, Gregersen and van Huyssteen were able to claim, 'this ancient and enduring dialogue has managed to successfully transform itself, in our present Western culture, into a sustained and dynamic contemporary discourse with its own prevailing identity for our times' (1998:1).

that universe in relation to God.[122] Disciplinary differences restricting the aims of consonance must be abandoned.

The heavy emphasis on science and theology leaves the Bible seemingly untethered from the discourse. In part this is because the Bible forms one element of the 'data-level' of theology and is assumed to enter the dialogue through theology's doorway. But we have argued that this is problematic. The biblical data requires its own distinctive contextual interpretation. It constrains philosophical-theological speculation in the same way that scientific data constrains metaphysical speculation. Although conceptually framed as a science-theology dialogue, in practice this often necessitates the three-way engagement of science-theology-bible.

We have shown in this chapter that science can no longer be seen as an objective, empirical study of natural phenomena articulated in mathematically precise language, nor can theology be seen as merely the subjective experience of the divine expressed in vague imagery or existential relationships. Both disciplines have subjective and objective aspects, and both are rational enterprises which also recognise the value of the aesthetic. When adhering to a critical realist approach, both disciplines are explanatory and interpretive, relying extensively on metaphor and model to express, often in metaphysical terms, a reality which is unobservable and never completely knowable. This entails a humble recognition of the limitations of interpretation and allowance for modification even though change in science is progressive and innovative, while change in theology is expansive and moderated by historic considerations. Science interprets nature in material terms, theology interprets the world in relation to God. Despite these differences, constructive, fruitful interaction is not only possible, but essential, and is already taking place with increasing intensity and intentionality.

[122] See Polkinghorne (1995e:24; 2007b:2).

Chapter 3
Setting the Stage: Establishing the Meaning of Heaven

'This many-sided confusion'
N.T. Wright

Introduction

The first challenge in assessing transitional continuity and discontinuity between 'heaven and earth' and 'a new heaven and new earth' (NHNE) is the ontological nature of the present heaven. Future conjecture without an agreed-upon conception of the present can only end in disarray. In describing the present *earth*, we may trust that common existential experience and scientific understanding is sufficient, while also recognising that 'earth' refers not merely to the planet, but to all of nature, and humanity's involvement in it.[123] But in the case of *heaven*, there is no common experience to draw from, nor even a common historical or theological understanding to shed a unified light on the concept. Rather there is a complex array of views, comprising not only several quite distinct meanings, but varying perspectives within each. Furthermore, the modern tendency to separately define heaven and earth may itself need reassessment. Biblical scholars have suggested that the phrase 'heaven and earth' in its original context would have had a relational meaning quite apart from an ontological one – not as separate entities but closely intertwined.

The need to qualify this array of views on heaven is a crucial pre-requisite in attempting to assess the nature of the *new* heaven, since establishing continuity or discontinuity requires a common initial reference point. The previous chapter highlighted the sometimes-disjointed relationship between the biblical 'data' of theology and its theological interpretation or philosophical use, and *heaven* is a case in point. There is need to interpret the biblical term contextually, separately from its theological-metaphysical evaluation. As Philip Johnston understatedly remarks, 'the term 'heaven' is used differently in the Bible and in Christian theology' (2000:540). This chapter will assess those important differences, showing the need for a much more judicious use of the term as it enters into the science-theology discourse and relates to an eschatological application.

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[123] This in turn prompts future questions as to whether 'new' refers to the planet, the natural world, or human societies and structures.

Heaven in the Bible

The biblical concept of heaven is quite difficult to pin down. The term *heaven* is found more than 350 times in the OT and more than 280 in the NT.[124] With rare exceptions the English *heaven* and its cognates (*heavens, heavenly*) are translated from a single term in each of the three biblical languages (Hebrew: *šāmayim;* Aramaic: *š^{e}mayin;* Greek: ουρανος / *ouranos*), but this is not a straightforward exchange. The Hebrew/Aramaic is always plural, though often translated singular. In each biblical language the same terms are often translated as *sky, skies,* or *air*, (roughly 12% in Greek, 16% in Aramaic and 25% in Hebrew) indicating a range of meaning in the original which does not parallel the modern English usage. Likewise, the English *heaven* has over time taken on cultural and theological meanings quite removed from the biblical sense, as this chapter will show. In addition to the concept meant by the expression 'heaven and earth', the possible biblical meanings of *heaven* can be set into four main categories: representational of God; the physical space beyond the earth; the particular abode of God and spiritual beings; and a post-mortem destination of persons' souls.

Heaven as Representational

The circumlocution of heaven as a representational term for God is frequently used in the NT, and according to Schoonhoven was almost exclusively a post-exilic phenomenon (1982:654; cf. Lunde, 1992:307). He further suggests that Jesus used this substitution as common practice: 'And he who swears by heaven, swears by God's throne and by the one who sits on it' (Mt 23:22). Similarly, Matthew's use of 'Kingdom of Heaven' parallels Mark's and Luke's use of 'Kingdom of God'.[125] The Prodigal Son in Jesus' parable declared to his father, 'I have sinned against heaven' (Lk 15:21), indicating that he had sinned against God. A more subtle form of this representational use occurs when the term heaven reflects God's sovereign authority rather than his dwelling place. The 'voice from heaven' heard at Jesus' baptism (Mt 3:17), prior to his death (Jn 12:28), and in John's vision (Rev 14:13), is in each case either explicitly the voice of God, or implicitly a voice suffused with God's authority. Paul's declaration, 'I was not disobedient to the vision from heaven' (Act 26:19) likewise indicates he was acting under God's authority.

[124] According to the NIV (Goodrick and Kohlenberger, 1990). Other versions vary, but not substantially.
[125] N.T. Wright asserts that 'Kingdom of Heaven' was a reverent Jewish way of saying 'Kingdom of God'. See Wright's further elaboration on the phrase later in this chapter and (1999:6; 2000b:34).

Heaven as Physical Space

In OT usage, heaven frequently refers to either the sky and the space immediately encompassing the earth,[126] or to the sun, moon and stars beyond – what today we would call outer space or the cosmos.[127] In either case, the referents are physical objects and phenomena, clearly part of the created order. For this reason, the Israelites were strictly forbidden from worshiping these objects (e.g. Ex 20:4, Dt 4:19, Jer 44:17-19). Heaven is also used metaphorically in relation to the Hebrew and Ancient Near Eastern (ANE) concept of the *firmament* (Heb. *rāqia*')[128]: it has windows (Gen 7:11), pillars (Job 26:11), foundations (2Sam 22:8), can be torn (Isa 64:1) or opened and shut (2Ch 6:26). Sun, moon, and stars were located in this firmament, with God's domain above. Scholars of ANE cosmology assert this was not parallel to our modern concept of space or universe.[129] As Paula Gooder explains (2011:6-7):

> God is depicted as walking on the dome or vault of heaven [Job 22:14]. This seems to indicate that what is to us apparently the roof of the earth is to God the floor of heaven, and it answers the question about why the same word, *shamayim*, can be used both for sky and for the place in which God dwells. The same word can be used because they are, effectively, the same place. We simply see it from below and God from above.

She further points out that while we may want to make a clear distinction between *heaven* as either the sky or God's dwelling place, the biblical languages do not. 'It is simply not possible to distinguish the two as clearly as some people would like to do' (2011:2). The New Testament similarly reflects this ambiguous usage (e.g. Mt 24:29-31; Mk 1:10; Act 1:11, 2:2).[130]

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[126] Examples include Isa 55:10 'As the rain and the snow come down from heaven…', and often refer to meteorological phenomena such as clouds, wind, dew, hail, and frost. Cf. Gen 8:2, Jsh 10:11, Ps 147:8.

[127] Isa 13:10 'The stars of the heavens and their constellations…'; Ps 8:3 'When I consider your heavens, the work of your fingers, the moon and the stars…'; Sun, moon, planets and stars are referred to as 'all the heavenly array' as in Dt 4:19. For the two 'domains' of physical heavens, immediate and celestial, see Mullen (1996).

[128] See Paula Gooder's explanation of *raqia* and the etymology of *firmament.* (2011:4-6). Attempting to identify the firmament with modern scientific entities such as the troposphere is, contra Harrison (1982:307), misguided. Ancient cosmologies were not 'scientific' and should be interpreted in their own context to find the truths expressed through their own language and imagery.

[129] Walton (2009:29-30) explains that this 'firmament' (sometimes translated as 'dome' or 'expanse') was conceived as something rather solid, holding back the cosmic waters. The sun, moon and stars moved in the firmament, and this was the extent of the cosmos.

[130] Paul's enigmatic reference to a visionary 'third heaven' (2Cor 12:2) adds a further complication. Lunde (1992) posits the gradual development of a belief in 'multiple layers of heaven', perhaps rooted in OT phrases such as 'heavens, even the highest heavens' (Dt 10:14). Gooder maintains the idea of 'levels' came later and is not found in the Hebrew bible. Such phrases emphasised the immensity of heaven rather than levels (2011:3) so the plural use in the OT may reflect the vast dimensions but not a division into levels.

Heaven as the Particular Abode of God and Spiritual Beings

The use of the word 'particular' here is to distinguish the spatial motif of God's dwelling from his omni-spatial presence (omnipresence) throughout the whole of creation. The most frequent biblical usage of *heaven* is the place where God dwells. The most complete picture of God's locative heavenly dwelling is found in Rev 4 and 7:9-17, where John 'in the spirit', enters through a door standing open in heaven and sees the throne of God encircled by a rainbow, before a sea of glass, surrounded by four living creatures and 24 thrones occupied by elders. These spiritual beings, along with cherubim, seraphim, archangels, and angels are all frequently seen as occupants of heaven, though not limited to heaven. A similar depiction is found in Eze 1, and allusions to heaven as the dwelling place of God are both implied and explicit throughout the Old and New Testaments.[131] In Isaiah's vision of heaven (Isa 6), the throne is seen within the temple, and this 'heavenly temple' motif is likewise re-iterated many times in both the OT and NT (e.g. Ps 11:4, Isa 63:15, Dan 7:9, Rev 11:19). 1Ki 22:19 uses the term 'host of heaven' in this context: 'I saw the Lord sitting on his throne with all the host of heaven standing around him on his right and on his left. This same phrase used in Dt 4:19 demonstrates the contrast of meanings, as 'host of heaven' (ESV) there refers not to spiritual beings, but to celestial bodies of sun, moon, planets and stars.

The mention of other spiritual beings creates one further distinction in the use of *heaven.* While heaven as God's dwelling place is depicted biblically as a spatial location, this lies within the larger framework of the 'heavenly realms'. Passages such as Rev 12:7-12 and Job 1:6-12, even if metaphorical, picture heaven, like earth, as a battleground of spiritual forces. Paul speaks of 'authorities… powers… and spiritual forces of evil in the heavenly realms' (Eph 6:12). Job 1:12 concludes 'then Satan *went out* from the presence of the Lord', and in Rev 12:7-8 'the dragon and his angels… lost their place in heaven'. This indicates a differentiation between God's particular dwelling place and the broader heavenly realms. Correspondingly, the presence of spiritual beings does not necessarily indicate heaven. Gooder notes that over time 'language about heaven has moved from spatial to spiritual reality. Heaven is now perceived to exist only in a spiritual realm and

[131] e.g. Ps 33:13-14 'From heaven the Lord looks down and sees all mankind; from his dwelling place he watches all who live on earth.' Heaven is depicted as God's throne or habitation (Isa 63:15), his sanctuary (Ps 102:19; Heb 8:1-2), and as the true tabernacle of which the earthly temple is a mere copy and shadow. 'For Christ did not enter a man-made sanctuary that was only a copy of the true one; he entered heaven itself' (Heb 9:24).

no longer in a physical realm. This is a very different view from that of the Hebrew Bible' (2011:8).[132]

Heaven and Earth as Totality

The importance of the phrase 'heaven and earth' as a hendiadys[133] or a merism[134] cannot be overstated. A significant percentage of the uses of *heaven* are in the context of this phrase, and numerous scholars suggest that 'heaven and earth' is a shorthand for 'all that is', or 'the universe'. Victor Hamilton's highly regarded commentary even translates Gen 1:1, 'In the beginning God created the *universe*.' (1990:103 my italics).[135] However, this is problematic. As we have seen, the ancient Hebrew cosmological understanding of 'all that is' was exceptionally different from our modern scientific cosmology, and the biblical authors had no conception of the vast space-time universe of modern science. Simply associating 'heaven and earth' with the universe can be deeply misleading in a science-theology dialogue. Biblically, 'heaven and earth' cannot be construed as merely analogous to the dichotomous terminology of natural and supernatural, physical and spiritual or visible and invisible.[136] Rather the bible views heaven and earth as one world, a single and quite fluid physical-spiritual reality. ANE scholar John Walton's in-depth assessment suggests a far more relational interpretation based on God's creative ordering of a functional dynamic between earth and heaven rather than a material creation (2007, 2009). Gooder maintains that the phrase occurs 'so often in the Bible that it is clear that the two are inseparable… they continue to coexist side by side and will be re-created together at the end of all times' (2011:9).

Heaven as Possible Post-mortem Destination

Of the more than 630 occurrences of 'heaven' in the bible, only a small handful give any indication that heaven *may* be a post-mortem destination for human beings, yet this

[132] Mounce (2001:542) states, 'although "heavenlies" is a spatial concept, it is a spiritual and not a physical place'.
[133] A hendiadys is a singular idea expressed by two nouns joined by 'and'.
[134] A merism is an expression of totality through two contrasting parts.
[135] Grider (2001a) likewise suggests that the OT has no word for 'universe', and the phrase 'heaven and earth' expresses this idea. In other words, 'heaven and earth' is shorthand for 'everything that exists'.
[136] The biblical reference to *all* things visible and invisible (Col 1:16) emphasises wholeness rather establishing a parallel with heavenly and earthly. Wright finds the terminology of 'natural' and 'supernatural' ill-conceived. 'If we talk about 'natural' and 'supernatural', we can easily slide back into that Deist framework of thought in which God lives in the 'supernatural' world and occasionally 'intervenes' in the 'natural' world; or, worse, into a neo-Gnosticism in which the 'natural' world is either trash or actually evil' (2000b:42).

interpretation is widely held in Christianity.[137] Wright, as a prolific and erudite scholar on the topic of life after death, has a particular grievance against this misuse of *heaven* and frequently denounces the misconception from which it arises:

> Very often, people have come to the New Testament with the presumption that 'going to heaven when you die' is the implicit point of it all, of Christianity and indeed of religion. They acquire that viewpoint from somewhere, but not from the New Testament. But when they then read the New Testament, they think they find it there. (2000b:33)

Wright identifies several biblical phrases associated with heaven (2000b:33-38) in order to demonstrate that in none of these is heaven implied as a destination of the human soul or spirit after death. These include:

a) kingdom of heaven
b) eternal life
c) salvation kept in heaven for you
d) our citizenship is in heaven
e) the heavenly city
f) the so-called 'little apocalypse' of Mk 13

A critical appraisal of Wright's arguments is warranted because of the magnitude of the implications. If Wright is correct that each of these uses of 'heaven' have been misconstrued, then a long-standing commonly held Christian belief is without biblical merit.

Before examining Wright's critique, a related hermeneutical dilemma must be noted. There is a pervasive tendency in literature on 'heaven' to conflate the concept of the present 'heaven' with the 'new heaven and new earth'. Because there is indeed *some* connection between them, and because human destiny after death is biblically associated with future resurrection in the NHNE – yet people die in the present – the confusion becomes magnified over the question of life after death. Lunde's survey of 'heaven' in the gospels asserts, 'Jesus refers to heaven as the place of future bliss for the righteous who follow him (Mt 13:43)' (1992:307). Strangely for such a key claim, only the single reference is offered in support, yet this reference does not include the word *heaven* at all: 'Then the righteous will shine like the sun in the kingdom of their Father.' Apparently the phrase 'kingdom of their Father' is *presumed* to infer an equivalence to *heaven*, yet no correlation is established.

[137] See the later section in the chapter: 'Heaven in History and Christian Thought'.

He continues with additional support, 'they have a "great reward" in heaven (Mt 5:12 par. Lk 6:23)' and 'will gain an incorruptible "treasure" (Mt 6:20 et al.)' (1992:307). But the existence of a heavenly reward is not an *a priori* determination of the destination of its recipients, as Wright will argue. Thirdly Lunde adds Jesus' promise to his disciples of 'a room in my Father's house' where they will be with him (Jn 14:2-3), and fourthly 'the image of a banquet is employed to portray heaven as a place of joy and celebration (Mt 8:11 et al.)' (1992:307). Again the phrase 'a room in my Father's house' is presumed to infer an unestablished correlation with the term 'heaven', while the banquet image occurs in the context of the 'kingdom of heaven' or 'kingdom of God' (which Wright argues is *not* heaven). While these examples may be dealing with 'life after death', not a single reference uses the Greek ουρανος in its simple form. Lunde then relates heaven with eternal life, concluding, 'though no explicit discussion is given regarding when heaven begins, most sayings portray the "end of the age"' (1992:307). Clearly here he is referring to the NHNE, *not* a present post-mortem destination. Johnston argues that 'future life is never called 'heaven' in Scripture, nor is death ever described as 'going to heaven.' Many writers progress immediately from the biblical data to the Christian concept without noting this' (2000:541).

N.T. Wright's Refutation

Wright's refutation and counter-explanations assess those occasions where the biblical use of 'heaven' *could* be construed to imply a post-mortem destination:[138]

KINGDOM OF HEAVEN

Wright first clarifies the representational use: 'The phrase 'kingdom of heaven' in Matthew does not mean 'a place, called "heaven", to which you go after death'. It is, rather, a reverent, typically Jewish, way of saying 'kingdom of God' (2000b:34). He then explains its meaning:

> The phrase 'kingdom of God' does not mean 'a place over which God rules', particularly not conceived of as a place other than the present world. It means, rather, 'the *fact that* God rules'. We would do better to treat it as '*kingship*, or *kingly rule*, of God'. (2000b:34)

If Wright is correct, as Polkinghorne and Moltmann concur,[139] the kingdom of heaven does not depict location, but indicates any place or time (past, present or future) in which

[138] The others ('eternal life' and Mk 13) are theological and will be assessed in subsequent chapters.
[139] See e.g. Polkinghorne (2002a:80-82; 2005a:78); Moltmann (2010:29-30).

God's rule is recognised and upheld. The wide contextual variations of the phrase certainly support this view. The kingdom is seen as both present and future (cf. Mt 12:28; Lk 22:18), earthly and heavenly (cf. Lk 9:62; Jn 18:36), physical and spiritual (cf. Lk 22:30; Lk 17:21). Wherever God's kingship and rule is acknowledged rather than resisted, there is found the kingdom of God. Wright also ties this kingship-expectation to the first-century Jewish hope of a new age when God alone would be king (2000b:34). The eschatological kingdom may be tied to Christ's coming and closely linked with the NHNE but is not referring to a heaven awaiting us after death.

SALVATION KEPT IN HEAVEN FOR YOU

Wright refers here to 1Pet 1:4-5, '…he has given us new birth… into an inheritance that can never perish, spoil or fade – kept in heaven for you…until the coming of the salvation that is ready to be revealed in the last time.' Wright suggests that this is often misread as though heaven is the place where ultimately salvation will be found. But this is reading an idea back into the text. Wright clarifies, 'the idea of something being 'kept in heaven for you' does not mean that you have to go and live in heaven in order to enjoy it' (2000b:35). Rather, the inheritance is being 'kept safe' in heaven (which Wright equates to 'God's dimension of present reality') until that time when salvation is revealed.[140] Wright's main point, that an inheritance may be received *in situ* is convincing, even more so in relation to the future context of the passage and *the coming* of salvation.

OUR CITIZENSHIP IS IN HEAVEN

Closely related is the verse 'but our citizenship in heaven. And we eagerly await a saviour from there…' (Php 3:20). Wright suggests that the language of citizenship functions not as a metaphor for ultimate destination, but for identity and belonging, as in the context of Roman citizenship, which Paul would certainly have had in mind. Roman citizenship conferred special rights and privileges, regardless of whether one lived in or would ever even enter Rome itself. In fact, the trajectory was outward *from* Rome, extending its influence and power rather than drawing people back *into* it. As Wright explains:

> The people to whom Paul was writing in Philippi were Roman citizens, but they had no intention of going back to Rome… If and when the going got tough there,

[140] Wright does not pursue this further, but many others relate the 'the last time' to the end of the age and Christ's return e.g. Davids (1990), Goppelt (1993). Witherington connects this salvation to Jesus, maintaining that our future salvation 'is said to be kept in heaven because Jesus is in heaven… to be brought to us by our perfect Lord on his Day' (2007:79).

> the emperor would come *from* Rome to deliver them… and establish them as a true Roman presence right there. (2000b:36)

The context of the verse itself – 'awaiting a saviour *from* there' – certainly supports this. Wright adds that this view is 'much more integrated with a theology of new heavens and new earth' (2000b:36).

THE HEAVENLY CITY

Wright refers here to Rev 21 with its description of the New Jerusalem, the heavenly city. He rather confusingly takes issue with those who consider Revelation to be primarily (quite wrongly, he believes) a vision of the future, and sees the book up to that point as much more a dimension of present reality. But that is a problem to be explored later. The *future* event portrayed in Rev 21-22 is not one of people escaping to join God in his heaven, but of the New Jerusalem coming down *from* heaven. He asserts the purpose of this descent:

> …so that the dwelling of God will be with his human creatures, and that, eventually, heaven and earth will not be separated, but, in being renewed, will be integrated with each other. The great claim of Revelation 21 and 22 is that heaven and earth will finally be united. (2000b:38)

While these claims of integration and unity need further development, the salutary point here is that the heavenly city of New Jerusalem is not the equivalent of "heaven", but comes down *from* heaven to rest on earth, forming in some way, a new and transformed relationship between the two.

Other Biblical Terminology Related to Heaven

The previous sections have shown that the term *heaven* is never employed biblically to denote a post-mortem destination. Yet Barr's important work on biblical semantics asserts that the correspondence between biblical words and theological concepts is often more accurately expressed in word-combinations or sentences rather than individual words (1961:233). This begs the question – what *does* the biblical data say about life after death? Several terms or phrases are commonly viewed as synonyms for heaven in the NT. This section will argue that none of these refer to 'heaven' as previously defined, but rather to an 'intermediate state' between death and the NHNE. Quite possibly, as many argue, this intermediate state (at least for those redeemed 'in Christ') is itself either *in heaven* or closely associated with the heavenly realm. But these are two separate issues which must be carefully distinguished to avoid confusion: first is the biblical

terminology and how it is employed; second is the theological meaning of that terminology in relation to its distinctive historical development. The controversial concept of the intermediate state has significant theological implications for the question of continuity of the individual and will be examined in a later section.

PARADISE AND GARDEN

The term *paradise* in its English usage has become prominent in describing the afterlife, yet its use in the Bible is exceptionally infrequent: thrice each in the OT and the NT. The word is most likely of Persian origin and designates a walled garden (Ryken et.al., 1998:316). The OT uses of *pardês* (SoS 4:13; Neh 2:8; Ecc 2:5) are translated as a physical orchard, forest, and park, respectively. 'Garden' in Gen 2:8 is translated *paradeisos* in the LXX referring specifically to the garden of Eden.[141] But the NT (Lk 23:43; 2Cor 12:4; Rev 2:7) shifts the meaning outside the material realm. Paul relates a vision (2Cor 12:2-4) of a man 'caught up to the third heaven', uncertain whether 'in the body or out of the body' but 'caught up to paradise'. The question is why Paul would intentionally avoid the simplicity of the term 'heaven'. By *third* heaven Paul likely implied God's domain, rather than the sky or cosmos (Wright, 2003:387). Regardless of the interpretation, this was nonetheless a visionary 'seeing' experience. Paul's use of *paradeisos* is possibly descriptive of what he saw – a garden – although he gives no description and no basis on which to ground any possible equivalence with the term *heaven*. Paul could have used *ouranos*, but did not.

Jesus said to the thief on the cross (Lk 23:43), 'today you will be with me in paradise'. This is problematic not only because it is specific to Luke – Matthew and Mark record only the robbers' (plural) insults – but because Jesus explicitly did *not* ascend to heaven during the period of his death, but only after his resurrection (cf. Jn 20:17; Lk 24:51). Although without explicit reference, Jesus is held to have *descended* to Hades, or the realm of the dead (Act 2:31; 1Pet 3:19), a historic doctrine of the Christian faith attested in the Apostle's creed.[142] It would seem then, that if Jesus was using *today* literally, he could *not* have meant heaven, and paradise would thus be associated with the place of the righteous dead in *sheol* or *hades*.[143] Again, if Jesus' intended meaning was heaven, there

[141] See Gooder's discussion of paradise (2011:74) and its explicit connection to Eden.
[142] The creed states, 'He was crucified, died and was buried; he descended to the dead. On the third day he rose again. He ascended into heaven…'
[143] Wright ascribes to this view, seeing *paradise* as synonymous with the intermediate state, although not explicitly stating its pre-resurrection location (2008:171).

was a perfectly good word he could have used, *ouranos*, yet he chose the obscure *paradeisos*. The third use of *paradeisos* in Rev 2:7 promises the faithful that they will be given 'the right to eat from the tree of life, which is in the paradise of God'. This alone does not imply that the faithful will live there, nor that this paradise is equivalent to heaven, and furthermore the passage is future tense. The tree of life *does* reappear in John's revelation of the future New Jerusalem (Rev 22:2), thus connecting to the NHNE rather than to the present heaven of God's abode.

ABRAHAM'S SIDE

The expression 'Abraham's side' is used only once, in a story Jesus told (Lk 16:19-31),[144] and refers to the post-mortem experience of the beggar Lazarus, carried by angels to be comforted at Abraham's side, whilst his antagonist was being tormented across a great chasm. No mention is made of heaven nor of God's presence, and the scene bears no resemblance to any other description of heaven. Nevertheless, Christian scholars have often unhesitatingly taken this as a metaphor of heaven and hell: 'The parable of the rich man and Lazarus speaks of "a great chasm" fixed between heaven and hell, that "none may cross"… reinforcing the sense of heaven as having its own space' (Ryken et al.:371). Adding to this confusion, some English versions have translated *hades* as *hell* in this particular passage, yet there is no indication that Jesus used *geenna* (hell) and *hades* synonymously.[145] Bearing in mind Jesus' words that 'no-one has ever gone into heaven except the one who came from heaven' (Jn 3:13), it seems extremely unlikely that Jesus was using this story to refer to heaven. The use of the word *hades* indicates that the story, whether parable or depiction, was instead referring to the 'realm of the dead' in the intermediate state.

MY FATHER'S HOUSE

Here again we have a phrase used only once by Jesus. 'In my Father's house are many rooms' (Jn 14:2). While some commentators maintain that *my Father's house* refers to heaven,[146] others take a more cautious view, noting like N.T. Wright that, 'other

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[144] Some hold this to be a parable, and others a true depiction of the afterlife.

[145] The NIV is not alone in this (KJV often translates *hades* as hell), but it seems striking that this is the *only* occasion that the NIV translates 'αδης or *hades* as 'hell'. In Jesus' context, *hades* would have been understood as the Greek equivalent of *sheol*, the 'realm of the dead'. (N.b. Goodrick and Kohlenberger (1990) transliterate γεεννα as *geenna*, but often seen as *gehenna.*)

[146] E.g. Morris is adamant that, '"my Father's house" clearly refers to heaven,' while 'the meaning of "rooms" is not so clear' (1995:567), yet does not mention the temple interpretation. Carson explores other options but concludes, 'the simplest explanation is best: *my Father's house* refers to heaven (1991:489).

references to 'my father's house' clearly refer to the Temple' (2003:446).[147] However, these positions are not mutually exclusive but emphasise a subtle difference in nuance. Clearly 'my Father's house' is a metaphor, but is it a metaphor for heaven or for the temple – or something intrinsic to both? Those preferring 'temple' are not implying the earthly temple, but rather the symbolic *meaning* of the temple in its Jewish historical context: the meeting place between God and man, earth and heaven.[148] As Wright explains:

> 'Jesus is using the image of the many apartments in the large Temple complex as a picture of the many 'rooms' which will be provided in the heavenly world for which the Temple is both the earthly counterpart and the point of intersection' (2003:446).

Why not then simply use the term 'heaven' instead of 'in the heavenly world'? A significant reason is that Jesus himself chose not to. He could have said, 'in heaven there are many rooms'. This distinction of terminology is important. As we have seen, the unqualified use of *heaven* primarily denotes 'the particular abode of God and spiritual beings' suggesting both location and permanence. A post-mortem human inclusion in 'heaven', although a valid theological interpretation, alters this meaning, particularly if the location for humans is left unclear and the duration is temporary. The temple metaphor on the other hand (as will be seen in chapter 7) is primarily relational – as is the Pauline language in the following section – and avoids either confusing the meaning of 'heaven' or needing to qualify it as a 'temporary heaven' for deceased believers prior to resurrection.

The question of temporary vs. permanent also comes into view in this metaphor. For the term *monê* (rooms), Wright prefers the translation 'dwelling-places' because of its cognate *meno* ('abide'). The only other use of this word in the NT is Jn 14:23 which refers to both Father and Son coming to 'abide' or 'dwell' with the believer, clearly a relational meaning. The context of Jn 14:2 implies Jesus going to prepare rooms or 'dwelling-places' in God's house, and the believers will eventually follow to make their

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[147] Keener (1993:299) references the eschatological temple (Eze 43). F.F. Bruce agrees with a temple interpretation, yet not the Jerusalem temple but 'the heavenly home to which Jesus is going'; yet he sees this emphasis not as locative but purely relational: it is 'the consummation of the fellowship between him and his disciples' (1983:297-8).

[148] Like F.F. Bruce (1983), Newbigin strongly asserts this relational aspect as Jesus' primary meaning. 'The Father's house… is not a building made with hands. Nor is it another world beyond death. It is that new dwelling place of God in the Spirit' (1982:180). Newbigin highlights the word 'abiding' as the real emphasis of Jesus' words, and the 'rooms' as 'abiding places' with God in the Spirit. Likewise Tenney (1948:213-4).

abode with him. Wright claims the normal meaning of *monê* is 'the temporary resting-place, or way-station' (2003:446) which some scholars have used to suggest a pilgrimage journey to heaven as in the tradition of purgatory, although Wright, Carson and Morris all refute this.[149] They disagree however, over whether these rooms are permanent (Carson, Morris) or temporary lodgings (Wright).[150]

Wright advances the temporary view, but *not* in terms of purgatorial journey:

> The 'dwelling-places' of this passage are thus best understood as safe places where those who have died may lodge and rest, like pilgrims in the Temple, not so much in the course of an onward pilgrimage within the life of a disembodied 'heaven', but while awaiting the resurrection which is still to come. (2003:446).

Wright's conviction may be less from a linguistic standpoint than a theological one; he associates these rooms with the intermediate state, preceding the final state of resurrection in the NHNE (2008:150). In his defence, the simple image of 'rooms' does not correlate easily with any biblical depiction of heaven, nor with the sparkling vision of the New Jerusalem; it seems reasonable then to consider this an aspect of the intermediate state, where the relationship of 'abiding' is permanent, but the location temporary.

Although both Carson and Morris uphold the permanent view, it is vital to understand why. Both take the following verse (Jn 14:3b) – 'I will come back and take you to be with me that you also may be where I am' – as a reference to the *parousia* or second coming of Christ. They then interpret 'my Father's house' (14:2) in relation to the *final* resurrected state after Christ's coming, not to a present heaven of life after death. One might then conclude that they deny an intermediate state, suggesting that resurrection begins immediately at death, but this is not the case (Carson, 1996:37-8). They, like Wright, assert that resurrection takes place not at death but at the *parousia;* therefore an intermediate state is necessary, but left undefined. The difference is that Carson and Morris see 'my Father's house' as a reference to the final state while Wright sees it in reference to the intermediate, to be discussed further in chapter 5.

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[149] Carson takes issue with many Roman Catholic scholars in a purgatorial notion that sees heaven 'as a series of progressive and temporary states up which one advances until perfection is finally attained. The word carries no such overtones' (1991:489). Cf. Morris (1995:567).

[150] The Latin Vulgate rendered the term *mansiones,* which in the KJV and RSV became *mansions*. The Latin may in fact carry the connotation of temporary lodgings or way-stations, but Carson disputes this sense in the Greek, and the English word *mansion* has a permanent sense as well. The simple 'rooms' is thus preferred (1991:489). Wright is unequivocal in viewing *monê* as 'temporary lodgings' (2008:41). He submits that the word for dwelling-places 'is regularly used in ancient Greek not for a final resting place but for a temporary halt on a journey that will take you somewhere else in the long run' (2008:150).

SEEING GOD FACE TO FACE; BEING IN GOD'S PRESENCE

A final biblical metaphor often associated with heaven comes from 1Cor 13:12, 'Now we see but a poor reflection, then we shall see face to face.' McGrath claims, 'the Christian hope is often expressed in terms of seeing the face of God directly, without the need for created intermediaries' (2003:181). The question is, does this necessarily take place in heaven? McGrath relates the idea to 'divine acceptance', the opposite of the OT metaphor of God 'turning away' his face. Moses was granted the rare privilege of seeing God's glory, but this was on earth, not heaven (Ex 33:18-20). In the Pauline metaphor a mirror is used to differentiate the level of understanding between *now* (a poor reflection) and *then* (clearly, as in face to face). McGrath also mentions 1Jn 3:2, 'when he appears… we shall see him as he is', but takes this to indicate the second advent and NHNE (Rev 22:4), not present heaven (2003:181).

A more useful support here is Paul's struggle with life and death (Php 1:23): 'I am torn between the two: I desire to depart [from the body] and be with Christ, which is better by far; but it is more necessary for you that I remain in the body.' One may logically deduce that if Christ resides with his Father in heaven,[151] then by extension Paul expects to be with Christ *in heaven* – yet once again this location is not explicitly stated by Paul. Consistently neither Christ nor Paul use the term *heaven*, but rely on other words or metaphors. As Wright often explains, we might call this 'heaven' but the Bible never does.[152] Thus we find consensus among the scholars noted above, that the hope of 'being in Christ's presence' affirms a relational condition of the intermediate state, yet the question of location remains contested and to this point unresolved. We believe it appropriately cautious therefore to affirm the biblical referent to relational condition and resist naming this state 'heaven' so as to avoid potential confusion, and to leave the critical tension between the differing positions in place.

Summary Evaluation

The preceding biblical analysis may seem overly cautious regarding the interpretation of phrases or metaphors simply because they contain no explicit reference to 'heaven', but the purpose has been to examine the biblical data on its own terms – rather than through

151 See e.g. Eph 1:20, Heb 9:24, 1Pet 3:22.

152 Wright states, 'There is no reason why this state should not be called heaven, though we must note once more how interesting it is that the New Testament routinely doesn't call it that and uses the term *heaven* in other ways' (2008:172).

the historical-theological context which has developed around it. We have shown that the biblical use of the term *heaven* is limited to the physical space around the earth, the abode of God, and the realm of spiritual beings. Interpreting phrases regarding post-mortem human destiny as *heaven* – even if theologically valid – can confuse rather than clarify the biblical term. Even though the term *heaven* is not used specifically as the destination for human beings[153] as this review of biblical phrases has shown, this does not dismiss a continued existence after death and 'abiding with Christ' for the redeemed. But the broader term 'intermediate state' helpfully refers to the post-mortem condition of *all* deceased human beings, not only those 'in Christ'. The continuity or discontinuity of an intermediate state for human beings after death remains to be examined. All this begs the question, if not from the biblical terminology, from where then did the pervasive idea of 'going to heaven when you die' arise? The answer lies in the long history of theological thought.

Heaven in History and Christian Thought

The concept of heaven in Western Christian thought arises from a well-established tradition diverging far from the biblically restrictive use of the term. Because the literature on heaven is so extensive and the popular conception so prevalent, ignoring or dismissing the centuries of development of this popular view is not a useful option; rather it is crucial to be conscious of its origins and profound influence in Christian thought, as well as its continuing impact on academic theology today. This process of development can best be described as one of 'conflationary theology', where multiple perspectives on the nature of life after death are conflated under one umbrella term, *heaven.* Ultimately however, our aim will be to carefully distinguish between 'heaven', 'the intermediate state', and 'the new heaven and new earth' along with other distinct aspects of the NHNE such as 'resurrection' and a 'millennial kingdom'.

McDannell and Lang's extensive historical survey on heaven traces the seeds of this development as far back as pre-Christian Jewish thought, where several competing ideas were gaining traction, including the netherworld (*sheol*), resurrection (construed mainly

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[153] This does not exclude exceptional cases of individuals being 'taken' to or 'seeing' heaven. E.g. Elijah (2Ki 2:11), Ezekiel (Eze 1;1), Stephen (Act 7:56), Paul (2Cor 12:2), Jesus (Jn 3.13, Act 1:11), the two witnesses (Rev 11:12). Much of John's vision of Revelation takes place in heaven. In Rev 7:9 John sees a multitude of people before the throne. However, this is a) a vision; b) a specific group (7:14); c) eschatologically tied to Christ's coming and the end of the age (11:15).

in national and political terms), and a Hellenistic Jewish strain which entailed ‘a philosophical and mystical concept of the soul’s ascent to heaven’(1988:2). Despite early Christian modifications which Wright claims included the clarity of a two-stage process from death to intermediate state to resurrection,[154] further developments in Christian thought continued in multiple trajectories, informed by culture, tradition, socio-political and religious change, or simply theological speculation, often with no biblical basis.[155] McDannell and Lang’s survey rigorously outlines these developments and their origins through each major period of Christian history.[156]

Much speculation was based on biblical descriptions and imagery which (as shown in the previous section) did not in fact refer to *heaven* but to other aspects of the afterlife, now conflated into one multi-faceted concept. This speculation reached a high-water mark in Medieval theology, exemplified by Dante Alighieri’s 14th C. *The Divine Comedy*, with its immensely detailed descriptions of heaven and hell in social-hierarchical constructs, complete with elaborate schematic diagrams. ‘For visionaries and poets the next world was a well-planned city-state situated in the midst of a paradise-like garden with rivers and rich vegetation’ (McGrath, 2003:74). The re-shaping of heaven through human imagination and biblical imagery is perhaps no surprise.[157] As McGrath explains:

> The concept of heaven is an excellent example of a Christian idea that is fundamentally imaginative in provenance, and that demands an imaginative mode of encounter with the reality that it mediates. (2003:2)

What is surprising however, is how these imaginative depictions – and the conflationary theology they represented – progressed through the Reformation to become embedded not only in popular belief, but in modern Christian theology and doctrinal formulations.

The Anglican *Thirty-Nine Articles* (1571:article XXII) condemned the Catholic doctrine of purgatory for ‘being vainly invented, and grounded in no warranty of Scripture’.[158] Yet its own affirmation of the afterlife in the later *Westminster Confession of Faith* (orig.

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[154] Wright offers a detailed overview of the transition from Jewish to Early Christian views, listing seven ‘modifications’ of thought. (2008:41-48)
[155] McDannell and Lang (1988) provide overwhelming evidence of the wide variety of external (i.e. non-biblical) influences on the development of new ideas and speculation around *heaven.*
[156] Cf. J. Russell (1997), McGrath (2003), Doyle (1999).
[157] Cf. Alcorn (2004) on imagining heaven. McGrath highlights three dominant images of heaven in Christian thought: the kingdom, the city and the garden (2003:6ff). Each of these is future and communal, yet have nevertheless been conscripted as portraying individual experience of the afterlife.
[158] See Noll (1991:220-1)

1646) equally lacks explicit biblical support for its claim of souls being 'received into the highest heavens':[159]

> The souls of the righteous, being then made perfect in holiness, are received into the highest heavens, where they behold the face of God in light and glory, waiting for the full redemption of their bodies. (Westminster Assembly, 1990:ChXXXII).

As recently as 1997, the *Catechism of the Catholic Church* officially endorsed the term *heaven* in this conflated manner, combining images of 'heavenly kingdom, celestial paradise, and a 'state of supreme happiness.[160] Reflecting Protestant theology, Johnston (2000:540) states that 'in theology "heaven" usually refers to the eternal destiny of Christians.' Wright concurs: 'Traditionally, of course, we suppose that Christianity teaches about a heaven above, to which the saved or blessed go, and a hell below, for the wicked and impenitent' (2008:17).

McDannell and Lang offer an excellent summary of contemporary belief.[161]

> Typically, Christians believe in two lives. One spans the time between birth and death and the second reaches out beyond death. This second existence has a beginning but no end. It is characterized by unsurpassable happiness in a place commonly termed "paradise" or "heaven." Whether heaven commences immediately at death, or following a period of purging, or at the end of human history, eventually the righteous hope to be rewarded with eternal life. (1988:x)

The description is filled with ambiguity, presenting two 'lives', but three options of when the heavenly life begins (corresponding to three very different pictures of what heaven *is*) – with no suggestion of how one moves from death to heaven if the transition is not immediate. Adding to the problem of *when* is the question of *what* heaven is meant to be. Alcorn attributes this confusion to the bible's mixed imagery. 'The writers of Scripture present Heaven in many ways, including as a garden, a city, and a kingdom' (2004:15).

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[159] The WCF was extremely diligent in providing biblical support for every statement, and several references are cited for this passage: Lk 23:43, Heb 12:23, 2Cor 5:1-8, Php 1:23, Act 3:21, Eph 4:10. However none of these explicitly refers to human beings in heaven, but refer either to paradise, the heavenly city, the heavenly dwelling (i.e. resurrected body), or to Christ being in heaven – as explored in the previous section of this chapter.

[160] The relevant clauses read: The souls of all the saints . . . and other faithful who died… have been, are and will be in heaven, in the heavenly Kingdom and celestial paradise with Christ, joined to the company of the holy angels. These souls have seen and do see the divine essence with an intuitive vision, and even face to face, without the mediation of any creature. This perfect life with the Most Holy Trinity - this communion of life and love with the Trinity, with the Virgin Mary, the angels and all the blessed - is called "heaven." Heaven is the ultimate end and fulfillment of the deepest human longings, the state of supreme, definitive happiness… By his death and Resurrection Jesus Christ has "opened" heaven to us.' (Catholic Church, 1997:1023-4, 1026).

[161] See also McGrath (2003); J.Russell (1997).

Gooder notes that 'biblical beliefs about heaven are varied, complex and fluid' (2011:xvi). McDannell and Lang add:

> For some, life everlasting will be spent on a "glorified" earth. Others think of heaven as a realm outside of the universe as we know it. There are those who predict an eternal life focused exclusively on God. Still others describe individual friendship and marriage. Eternal rest vies with eternal service… (1988:xi)

However, as the previous section has shown, the biblical writers are not calling all these things *heaven*. Christian tradition and theology have done that. McDannell and Lang's disconcerting conclusion precisely captures the problem: 'There is no basic Christian teaching but an unlimited amount of speculation' (1988:xi).

Confusion about heaven is not merely esoteric but has serious practical implications for Christian life in the present.[162] Catholic theologian Peter Kreeft writes, 'We have a homing instinct, a "home detector", and it doesn't ring true for earth… it is not home. Heaven is' (1989:66). Yet he goes on to promote 'heaven on earth' (117) and 'earth as a part of heaven' (120). Do human beings ultimately belong to this earth, with all the responsibility that entails, or is some form of heaven the destination for the faithful? Wright offers this bleak assessment:

> I am convinced that most people, including most practicing Christians, are muddled and misguided on this topic and that this muddle produces quite serious mistakes in our thinking, our praying, our liturgies, our practice, and perhaps particularly our mission to the world. (2008:6)

Unless this confusion is resolved, the concept of a future new heaven and new earth will remain entrenched in the same ambiguity.

Summary

This historical evaluation makes clear that the use and misuse of the term *heaven* is too deeply entrenched for any attempted correction in terminology to resolve. However, for a science-theology dialogue to achieve any success in eschatological discourse, it is imperative to clarify how the term *heaven* is being used at any given time. This section has established that the term *heaven* 1) has widely diverged from its biblical usage; 2) has conflated a variety of biblical images (and historical embellishments) without maintaining

[162] This is amply illustrated by two popular books entitled *Heaven is Not My Home* (Marshall, 1998) and *Heaven: Your Real Home*, (Tada, 1995), written to the same evangelical audience with no fundamental disagreement except the way the term 'heaven' is used. To add to the irony, a third book was published the following year: *I Believe in Heaven on Earth* (Higton and Higton, 1999).

distinctions; 3) currently represents a diverse array of conceptions embedded in the popular mindset with no single, uniform theological interpretation.[163] To clarify its use then, will require some means of disentangling all the conflated imagery – and I propose this can be done. We may identify three major 'aspects' of heaven: 1) God's heaven (i.e. the spiritual dimension of present reality); 2) a temporary heaven of human habitation after death (i.e. the intermediate state); 3) the future eschatological heaven (i.e. the NHNE and all it entails). A fourth aspect would be the physical heaven around the earth, but this is now rarely mentioned in contemporary theology. By maintaining these distinctions, substituting 'intermediate state' and 'NHNE' or 'new creation' for the latter two aspects whenever possible, the renewed theological clarity will greatly enhance the science-theology dialogue to follow.

Heaven in Science-Theology Dialogue

How then do we understand the first aspect – God's heaven – in any way conducive to the science-theology dialogue? There is no doubt that Wright does not always represent the majority view in biblical interpretation, but in this instance, there is no majority view, and Wright has gone some distance in disentangling the confusion. He provides a biblically consistent framework enabling deeper interaction with the philosophical and scientific perspectives of Moltmann and Polkinghorne.

Heaven as a Dimension of Present Reality

Wright offers his own succinct description of heaven which attempts to be faithful to the narrow biblical use of the term: God's dimension of present reality.[164] His aim here is two-fold. First, he clearly reflects the previous biblical discussion on heaven as the abode of God and other spiritual beings. The biblical picture gives a sense of a heaven within heaven: the inner sanctum representing God's divine presence and throne, the outer 'heavenly realm' inhabited by angels and spiritual powers (even powers of evil). But secondly Wright brings this idea into a more modern theological framework with the phrase 'dimension of present reality'. It is this whole inclusive heavenly realm to which Wright refers, his concern being not with distinctions *within* this realm, but between the

[163] J. Walls helpfully differentiates between 'theocentric' and 'anthropocentric' views of heaven (2008:402).
[164] This description was expounded in his Drew Lecture on Immortality in 1993, then further (1999, 2000b), and is presumed throughout his writings (cf. 2003:368; 2008:19, 168ff).

ontologically 'spiritual' heaven and its material counterpart, the cosmos, overlaid upon one another within the framework of the reality of creation.

In using the word *dimension*, Wright intentionally avoids biblical language which appeals to spatial imagery and thus generates in the contemporary mind a sense of distance and transcendence.[165] Rather, his intent is to emphasise the immanence of the heavenly realm, where heaven's relationship to earth is more akin to that between space and time, two dimensions of a single reality – or perhaps akin to the analogy of *Flatland*, where a two-dimensional existence restricts awareness of an 'invisible' three-dimensional reality.[166] Wright argues it was commonplace in Jewish thought to view earth and heaven as interconnected but 'veiled', as represented by the temple curtain (200b:42).[167] These analogies point out that the proximity of heaven and earth as 'overlaid' one onto another need not create any conflict in the way we necessarily conceive of heavenly space and earthly space.[168] Wright maintains a critical-realist reading of the biblical worldview (1992:61ff), and while he makes no attempt to ascertain a scientific correspondence for this heavenly dimension, by using the phrase *present reality*, he maintains that heaven lies within the same reality of creation as does the cosmos, not in some notional and indefinable realm of eternity.

Wright finds biblical support for this view in the several occasions where heaven is suddenly 'opened' and made visible,[169] as when Elisha's servant despairs until Elisha prays that his eyes may be opened, and suddenly he sees the hills filled with horses and chariots of fire (2Ki 6:17). Wright refers to these occasions as 'a sudden unveiling of what was there all along, but normally unseen… what is usually invisible becomes visible.' (2000b:41). He portrays Christ's resurrection appearances in this light, his body 'clearly physical' yet transformed as he 'disappears into God's space, that is, "heaven"'

[165] E.g. phrases such as 'the highest heavens' or 'in the heavenly realms' do not resonate with modern readers in the way they would have been understood in ancient Hebrews cosmology. Recall Paula Gooder's statement that over time 'language about heaven has moved from spatial to spiritual reality (2011:8).
[166] The spatial-dimensional analogy was developed in Edwin Abbott's satirical novella *Flatland* (1961 orig.1884) in which a two-dimensional realm is inhabited by shapes which posit or deny the existence of a "god" in a third dimension which they can neither see nor comprehend.
[167] The Jews were not unique in this belief. Many traditional religions maintain a belief that the ancestors remain near to the community of the living, but unseen. Bowker (1993:26) likewise notes this common belief about the dead. 'They existed somewhere near, just on the other side of the veil. The veil could be lifted or, at least, a hole could be made in it for a short talk…' Wright often mentions the Celtic belief in 'thin places' where heaven seemed near and spiritual awareness was heightened (2008:259).
[168] Wright expresses this duality as 'a two-sidedness to God-given, God-created reality' (2000b:42).
[169] E.g. 2Ki 6:15-19, Eze 1:1, Act 7:56, Rev 4:1.

(2008:55). But Christ's final ascension into heaven, being 'taken up before their very eyes' (Act 1:9) was unique.[170] Christ was not showing the path we all shall follow one day after death; rather, Christ was returning to heaven from whence he came, but in a resurrected and transformed body (Jn 3:13,31; Heb 9:24). Thus heaven is where, in Christ, 'the divinely intended future for the world is kept safely in store' until that day when 'it will come to birth in the renewed world "on earth as in heaven"' (2003:368).[171]

Heaven and Earth as Intertwined Open Reality

We have begun with Wright's view because he begins from the biblical data; his concern is to offer a theologically cogent and outward looking interpretation faithful to that data. As a scientist, Polkinghorne approaches the question of heaven differently; while he fully accepts the statement 'God created the heavens and the earth' his concern is one of process. Science rejects any instantaneous 'divine fiat' view of physical creation because the data clearly shows an immensely long evolutionary process from big-bang to galaxy formation to earth to human life.[172] This is well-established in science-theology dialogue. But what of the dimension of heaven, which does not feature in the scientific account? To be sure, Polkinghorne agrees with Wright that 'heaven and earth' refer to the same single reality, a reality he describes as 'a multi-layered unity' (1986:97).[173] Following Weder's suggestion that *reality* be the definitive common subject of a dialogue between natural science and theology (2000b:291), Polkinghorne conjectures about the *process* by which the heavenly dimension of this reality came into being. He does not devote a great deal of space to speculating on this problem, precisely because it is purely that – speculation. There is no biblical data and no scientific data related to the *process* of creation of a heavenly dimension. His interest lies more in the eschatological aspects of heaven, the intermediate state and the NHNE, because science has more to contribute to a dialogue where eschatology is 'theology's account of ultimate destiny' (2011:103). Like

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[170] There is of course the enigmatic exception of Elijah (2Ki 2:11-12) and possibly Enoch (Gen 5:24), but Elijah was taken without in fact dying, so does not relate to the question of heaven after death.

[171] As earlier established, our rewards (Mt 5:12), our inheritance (1Pet 1:4), our citizenship (Php 3:20), and our future salvation (1Pet 1:5) is in heaven – not so that we one day go there to claim it – but so as to be assured that it is kept safe for us until 'brought *from* heaven' (2003:368).

[172] Polkinghorne gives a thorough description of the scientific account of the development of the physical universe in numerous writings. See especially (1994a:71-3). This is discussed in depth in chapter 6.

[173] In a helpful discursive, Polkinghorne explains what he means by this phrase: 'I can perceive another person as an aggregation of atoms, an open biochemical system in interaction with the environment, a specimen of *homo sapiens,* an object of beauty, someone whose needs deserve my respect and compassion, a brother for whom Christ died. All are true and all mysteriously coinhere in that one person. To deny one of these levels… is to do less than justice to the richness of reality' (1986:97).

Wright, Polkinghorne carefully distinguishes 'heaven and earth' from these other aspects.[174] Nevertheless, the question he raises regarding the origination of the heavenly dimension is important in a critical-realist interpretation of reality, and his speculation is interesting if only because no one else has attempted it.

In an early work, Polkinghorne, following Popper and Gödel, surmises the existence of a 'noetic realm', in which humans participate with the mind (but not as a creation of mind), just as we participate bodily in the physical world. He writes, 'We have good reason for supposing that there are inhabitants of the mental world which are not anchored in the material. The first candidates I would like to consider are the truths of mathematics' (1988a:75). Noting that these truths somehow 'exist' and are 'discovered' by mathematicians rather than invented, much like the laws of physics, Polkinghorne steps beyond Gödel to suggest 'there is no reason to suppose that the austere abstractions of mathematics would be the only inhabitants of such a world of thought' (1988a:76). He links the experience of this mental world to the wider human experience of the spiritual realm:

> There might be active intelligences in that noetic world, which traditionally we would call angels. There might be powerful symbols, the 'thrones or dominions or principalities or authorities' of Pauline thought, or the archetypes that Jung discerned as active in the depths of the human psyche… Certainly if such influences are at work with consequences in the material world then they must be open at that level to appropriate scientific investigation, just as we are. (1988a:76).

In defence of this view, Polkinghorne repudiates Platonism, contending that here both the mental and material worlds share equally in reality, while human beings are in some ways 'amphibians', able to participate in both. In later writing he more closely links these two worlds in terms of the underlying mathematical order worked out in the laws of nature.[175] What is truly extraordinary is that 'by our biologically evolved consciousness we participate in a realm of reality which has not come into being either with us or with the origination of the physical world in the big bang, but which has always been there' (1988a:76). Such a reality must emanate from God's own rationality as 'the One who is Reason itself' (1988a:77), its 'truths' not arbitrary decrees of will, but dependent participants of the noetic activity of the mind of God. Polkinghorne thus offers a rational

[174] Regarding the phrase 'heaven and earth', he states: 'The heaven referred to cannot properly be the place of our eschatological destiny, for that is the 'new heaven and the new earth'(1994a:80).
[175] In full, 'The mathematical order that underlies physical process can be regarded as offering a way of understanding that "what is seen (the physical world around us) was made from things that are not visible (the outworking of the mathematical laws of nature)"' (2009:116).

and defensible argument for the existence of a heavenly realm (i.e. noetic world) existing eternally, yet wholly dependent on God as its source.

Polkinghorne's views align closely with those of Moltmann, particularly Moltmann's depiction of creation as a 'dual world' which is not complete in itself, but part of a continuous creation process which is 'open to God' and has its unity in him (1985:163). Polkinghorne draws on Moltmann's language of an 'open system' where the determined side is called earth, and the undetermined side heaven, offering his 'scientific encouragement' to the concept.[176] 'One might venture the thought that earth is process read downwards toward the material, heaven is process read upwards towards the mental' (1994a:80). For both, process and openness are the key elements to understanding the nature of heaven.[177] For this reason Moltmann asserts that God's potentialities and potencies (in the form of angels and heavenly beings) are found in the heavenly realm, and he uses the word 'heaven' to mean '*the openness to God of the world he has created*' (1985:165 his italics). As Polkinghorne explains, 'heaven is the outward completion of the earth, in the direction of the open and the unknown. A world without heaven would be a world without the possibility of transcendence' (1994a:80). Such a world would be a closed system, revolving on itself, in which nothing new could ever happen.

Moltmann offers a far more theologically detailed description of the intertwined relationship of heaven and earth than either Wright or Polkinghorne, but it is unnecessary to explore that further here.[178] The salient points are that like Wright and Polkinghorne, he distinguishes *heaven* in its unified reality of 'heaven and earth' from the intermediate state and from the eschatological NHNE.[179] His interpretation of heaven as 'the kingdom of God's energies, potentialities and potencies' (1985:172) conforms well to Polkinghorne's scientific perspective, and his terminology of creation as 'dual worlds' is comparable to Wright's notion of 'dimensions of present reality'. Moltmann develops the idea of the nearness of heaven to earth even further than Wright in stating, 'it is not that

[176] Polkinghorne recognises a 'consonance' in their views on an open system, even though mathematics does not feature in Moltmann's account (1998a:79; 2000d:935).
[177] Polkinghorne claims, 'the flexible openness of process [is] the locus of God's interaction with his creation' (1994a:81).
[178] For further explanation see Moltmann (1985:ch7).
[179] The terminology used in Moltmann's distinctions can seem confusing. In addition to 'heaven and earth' he speaks of 'the heaven of nature', 'the heaven of Jesus', 'the heaven of grace' (present), and 'the heaven of glory' (future). But the salient point is that he does not simply use the term 'heaven' to encompass these.

God is where heaven is, but that heaven is where God is' (1985:173).[180] So for Moltmann, 'when 'heaven opens', this means that God's energies and potentialities appear in the visible world' (1985:173.).[181] Whilst each of the three take different approaches and use different terminology (two dimensions, mental/material, dual worlds), they arrive at a common critical-realist view of *heaven* in which an intertwined heaven and earth *together* comprise God's creation, an open and continuous creation with God as the locus point.

Conclusion

In this chapter we set the task of attempting to determine an agreed-upon conception of the ontological nature of the present heaven. As the previous chapter made clear, biblical data sometimes requires its own contextual interpretation; theological discourse cannot always be assumed to represent this in a unified or accurate way, and *heaven* is a case in point. This chapter has shown that *heaven* indeed is a very difficult topic to contain, let alone define. With biblical constraints cast aside, its theological connections to death, the intermediate state, the spiritual realm, being with Christ, resurrection, and new creation, have combined to create a conviction in both popular Christian thought and historical tradition that heaven is *all* of these things – an outcome referred to as 'conflationary theology'.

By focusing exclusively on the biblical use of the term, we argued that *heaven* is in fact very few of these things, is quite narrowly defined, and most importantly does *not* refer to the post-mortem destination of human beings.[182] Wright's assiduous refutation of the handful of biblical passages that seemed to indicate this possibility was particularly beneficial. Other biblical terms often presumed synonymous with *heaven* were likewise assessed and determined to refer either to an intermediate state or an eschatological NHNE. Since the term 'heaven' is so entrenched, we proposed to 'disentangle' these

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[180] In Moltmann's description of this deeply interconnected relationship (1985:166-7) 'the intimate relations to God of the potentialities and potencies 'in heaven' take on significance for conditions in the reality of the world, and for the conditions of worldly possibilities.' Wright suggests this inter-connectedness as a tentative solution to the philosophical dilemma of an 'interventionist God'. The pervasive presence of heaven may provide a middle way between a providentialist God working only through the natural processes of his creation, and the interventionist God who contravenes natural law to perform miracles or direct the course of nature and humanity according to his purposes. (1999:16-17).

[181] Wright likewise sees a dynamic interrelationship, with heaven 'impregnating, permeating, charging' the present world, until a renewed heaven and renewed earth are fully integrated (2000b:3).

[182] This does not imply that the intermediate state cannot in some way be present 'in heaven', merely that the biblical use of the term does not in itself entail this conclusion.

concepts by identifying three separate ‘aspects’ of heaven: God’s heaven; the temporary ‘heaven’ (intermediate state) for humans after death; and the future eschatological heaven.

Finally, the biblical perspective (i.e. God’s heaven) was brought into a modern theological framework with Wright’s phrase ‘God’s dimension of present reality’ and compared with Polkinghorne’s scientific and Moltmann’s theological perspectives. When clearly delineated from the other aspects of heaven, these three showed a remarkable level of uniformity. Heaven and earth must be seen together as two intertwined dimensions of a single created reality, not static and complete, but open to the continued process of divine, creative activity. This recognition of ‘heaven and earth’ as the joined-together whole of God’s creation forms the basis of a biblical cosmology (chapter 7) uniquely distinct from contemporary cosmology (chapter 6). The ‘heavenly realm’, though of a different nature and ‘veiled’ to our eyes is nevertheless an integral part of the spatial-temporal creation. We have therefore established a common conception of the present *heaven* necessary to determine continuity and discontinuity in the process of transition to the eschatological heaven of the new creation.

Chapter 4
Death, Immortality and Eternal Life

'Life in the Age to Come'
N.T. Wright

Introduction

Despite the apparent discontinuity of physical death, Christian belief centres on the certainty that life continues beyond death. As with the concept of 'heaven', the biblical and theological insights of this belief are disputed and not easily integrated. Our first task then is to assess the theological arguments on which rest the Christian belief in immortality and/or eternal life and to determine what exactly is meant by these two concepts. Following that, we examine the nature of death itself, its scope and meaning, biblically, scientifically and theologically, briefly exploring the implications of death in the context of new creation. What this implies for the continuity or discontinuity of the individual will then be explored in the following chapter.

Immortality and Eternal Life

Eternal life is a key New Testament term and concept, while *immortality* is not. There is a potential disparity then, in using the terms as if they were synonymous. We will first clarify how the terms are used and understood biblically and theologically before examining their implications for eschatology. The Bible clearly affirms that God alone possesses immortality by nature (1Tim 6:16).[183] Its rare usage in the NT in regard to human beings indicates that those who 'seek' immortality are given eternal life (Rom 2:7), and immortality will be 'put on' in the resurrection (1Cor 15:54); it is not innately possessed but may perhaps be gained. Immortality is similarly implied in the OT (Pr 12:28) as the destination of the righteous, but there is no Hebrew word for it; it is translated from the phrase 'no death' (Scott, 1996:371). As for the unrighteous, the lake of fire or 'second death' of Rev 20:14 graphically pictures an ultimate destruction, unless seen through a preconceived lens of immortality. [184]

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[183] Milne expresses the standard biblical view: 'Inherent immortality, what Jesus referred to as 'having life in himself' (Jn 5:26), an attribute shared also be 'the Son', is a uniquely divine quality. All immortality referred to humans…. is necessarily a gift of the self-existent Creator of all life' (2002:152).
[184] Milne (2002:151) provides the biblical basis for the terms 'destruction', 'used in relation to hell as pointing to the condition of being 'destroyed', i.e. brought to an end. (Mt 10:28; Php 3:19; 1Th 5:3; 2Th

‘Eternal life’ by comparison is ‘a dominant theme of the New Testament’ (Yarbrough, 1996:212). The danger however, is in equating too closely the phrase ‘eternal life’ with the word ‘eternal’. The adjectival *eternal* suggests *eternity,* which in English implies abstract elements of time or God’s nature, as discussed in chapter 6. However, the biblical usage of the Hebrew *‘ôlām* (eternity) in the OT is extremely broad and contextually determined (440 uses translated into 69 English words or phrases, only rarely ‘eternity’), whereas the phrase Jesus used when speaking of human destiny was *eternal life*, a phrase not found in the OT. Of the 63 times *aiōnios* is translated ‘eternal’ in the NT, 43 are in the context of *zōē aiōnios* (eternal life). It is this use which predominates in the NT and is recognised by Wright and other scholars to signify not eternity, but rather ‘life in the age to come’.[185] This difference will be explored shortly. Suffice it to say that biblically, human beings are *not* innately immortal, but those who receive eternal life live indefinitely, sustained by the love and power of God, the source of life.

Theologically however, we find a more contradictory picture. James Barr’s study on immortality asserts that the Western church long maintained a staunch belief in the immortality of the soul:[186]

> In the older religious tradition it was held as clear that the immortality of the human soul was central to religion. The human body was subject to sickness and death, but the soul was immortal and could not perish. Anyone who doubted the immortality of the soul was likely to be considered as a dangerous heretic, if not a total denier of religion… (1992:1).

This view is unambiguous by the Reformation.[187] Barr goes on to note that this changed dramatically in the 20th C. as theologians such as Cullmann, Stendahl and Moltmann contrasted Greek and Hebrew views of the soul, proposing that immortality was in fact opposed to the biblical concept of resurrection. Edward Fudge argues convincingly that the immortality of the soul was a concept of Greek philosophy which the early church Fathers vigorously rejected, yet which nonetheless worked its way into Christian theology

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1:9; 2Pet 3:7), considered equivalent to ‘perish’: (Jn 3:16, 10:28, 17:12; Rom 2:12; 1Cor 15:18; 2Pet 3:9). He notes that those who argue for a hell of eternal duration interpret these terms differently.

[185] See e.g. D.H. Johnson (2000:643) in reference to Hill (1967).

[186] The term ‘soul’ in this section is understood to represent the non-physical aspect of the human person. This is not to make any distinction between ‘soul’ and ‘spirit’ nor to imply a dualistic presumption of human nature.

[187] The 1646 Westminster Confession states: ‘The bodies of men, after death, return to dust, and see corruption: but their souls, which neither die nor sleep, *having an immortal subsistence*, immediately return to God who gave them: the souls of the righteous… are received into the highest heavens where they behold the face of God… And the souls of the wicked are cast into hell’ (1990:96-7; my italics).

(1994:ch3-4).[188] Apologists, in an effort to combat pagan philosophy in its own context, freely appropriated non-biblical terminology and concepts to argue rationally in defence of beliefs such as resurrection and judgement which required a continuity of personhood beyond death. In the process, both immortality and a Platonic view of 'the soul' entered into Christian theological discourse (1994:23).[189]

Even then the Christian view of immortality differed from Platonic philosophy in two important ways. First, orthodox theology rejected the notion of the soul's pre-existence, dismissing the view of human beings as *inherently* immortal – in the way that God alone is. Human souls have a *beginning*. Secondly, as Fudge asserts, the early Fathers mainly rejected the idea of an unconditional future immortality for the soul after death; in other words, souls could have an *ending* – depending on their fate at final judgement.[190] The soul's duration was conditional upon God's sustaining providence and promise of eternal life; if removed it would cease to exist (Fudge, 1994:33). But here further divisions emerged, hinging on the fate of the wicked. Most early Fathers concluded that the wicked would ultimately perish, a position known today as 'conditional immortality'. Others such as Origen and Augustine argued that even though God *could* destroy the soul, this was contrary to God's will since humans are created 'in God's image'. Thus Augustine spoke of the soul's *natural* immortality (Fudge, 1994:33). This latter view became prominent, leading to the doctrine of 'eternal punishment' for the wicked alongside 'eternal life' for the saved, and thus to Barr's assessment of the soul's immortality as a central tenet of Christian doctrine.

What does this imply regarding continuity or discontinuity? Clearly there was no suggestion biblically, theologically or philosophically that death was the end of individual existence.[191] Even for those espousing the destruction of the wicked, this was not at death but at final judgement. The implied continuity of an immaterial 'soul' beyond death elicits serious questions about the nature of the human person, the concept of 'soul', the

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[188] Fudge views Calvinism as particularly culpable in this regard (1994:22). Cf. Schwartz (2000:269-80).

[189] Fudge refers to Robert Wilken's apt summary: 'The fathers modified the notion of the immortality of the soul as it was understood within the Greek philosophical tradition. Yet, in its main lines, they adopted the idea, adapting it where necessary to the requirements of Christian faith (1994:34).

[190] Fudge provides detailed evidence for this view in the writings of the church Fathers, although not incontrovertible due to the difficulty of assessing the precise sense of their statements (1994:33-4): Justin Martyr, Irenaeus, Tatian, Theophilus, Arnobius, Lacantius, Origen and Augustine.

[191] Wright notes that there were both Jewish sects and pagan philosophies which denied any kind of future life after death, but these were completely rejected by the early church (2008:37).

relationship between personhood and embodiedness, and the meaning of death itself. More broadly it concerns the relationship between personal identity and the physical creation – or new creation. Immortality as discussed above retains no apparent relationship to the physical world: a point of absolute discontinuity. And this is precisely where immortality – even conditional immortality – diverges from the New Testament concept of eternal life.

Conditional Immortality and the Fate of the Wicked

While immortality expresses merely the abstract *idea* of the soul's continuity after death, eternal life expresses the *nature* of that life: a 're-embodied life' in the new creation. Further discussion of immortality might therefore seem irrelevant, except for the dilemma of those who do not attain eternal life. Eternal life is exclusive, promised to those saved through faith in Christ, but individual eschatology (and the question of continuity) includes the fate of the wicked as well. Conditional immortality is important in this regard because of its relationship to the doctrine of eternal punishment and to the nature of resurrection and final judgement. It enables a potential resolution to the thorny problem of continued existence for the wicked in the new heaven and new earth. Must the new heaven and earth incorporate a new hell as well? How can this be reconciled with Paul's climactic statement that God will ultimately be 'all in all' (1Cor 15:28)?

The type of immortality espoused by Augustine and eventually adopted as the orthodox view of the western church regarded 'eternal punishment' as a necessary corollary of immortality in parallel with eternal life. This may be called the 'traditionalist' view, stressing punishment of eternal duration.[192] The 'conditionalist' view instead sees eternal punishment as ultimate destruction – often after a period of retributive justice - stressing the qualitative 'result' of the punishment 'in the age to come'.[193] A third option is the 'universalist' view, in which there is neither eternal punishment nor destruction because all eventually will be saved to eternal life.[194] Much of the controversy hinges on one's

[192] Linfield (1994:64) calls this the 'unending torment' view. He notes the doctrine of eternal punishment was not uniformly accepted by the church until the 6th century, certainly not before Augustine. Conditionalism predates the traditionalist view, traced to the early Church Fathers, notably Arnobius.
[193] See also Pinnock (2008:468-9) on conditional immortality.
[194] Universalism in various forms asserts that after death, all will eventually come to salvation and attain eternal life, thus dismissing any 'eternal' notion of punishment. Wenham identifies both universalism and 'unending torment' as the result of attempts to wed Plato's immortality of the soul to the teaching of the Bible (1974:36). Cf. Powis (1992), Cameron (1992).

interpretation of *aiōnios* (eternal) as either a qualitative state or a quantitative duration. Alan Linfield (1994:64) claims that one's view of immortality 'acts as a control belief' for the exegesis of texts dealing with the fate of the wicked and analogously for the hermeneutical 'sense' of *aiōnios*, which he carefully outlines in relation to the wider debate and its proponents.[195]

Fudge's thorough exegetical treatment of *aiōnios* suggests that both its etymological derivation as well as the 'sense' it takes on in Scripture is variable and disputed (1994:12). It carries both a quantitative and a qualitative sense, the former a 'forever' of everlasting duration, the latter a characteristic or quality of the coming age – without durative implications. Debate centres on which sense is intended, but Fudge concludes both are valid. Eternal *can* mean 'forever' – although even then *'ôlām* frequently qualifies things which are themselves temporary, indicating a lasting effect over the lifetime of the object qualified, e.g. the Aaronic priesthood (Ex 29:9), the ownership of a slave (Dt 15:17), Solomon's temple (1Ki 8:13). But in the NT *aiōnios* often implies the qualitative state of an age to come, reflecting the Jewish division of present and future age (1994:13). It is to this sense that Wright appeals when translating 'eternal life' as 'life in the age to come', even while it *may* also imply everlasting duration.

Fudge's analysis notes that six of the 70 NT uses of *aiōnios* qualify nouns which signify acts or processes – including the problematic referents *punishment* and *destruction*; the others are *judgment, sin, salvation* and *redemption*. By comparative analysis, he demonstrates that *eternal* qualifies the result of the act, not the act itself. The act of judging for example is not eternal, but the resulting judgment is eternal in its effect. Likewise, eternal punishment need not be eternal in its action, but in its result. He takes this sense as intending an eschatological '*other-age* quality' (Fudge, 1994:16, his italics). Indeed it is difficult to conceive how 'destruction' could be of eternal duration (i.e. in hell

[195] Linfield points to Wenham (1974) as marking the modern re-emergence of conditionalism and to Fudge (1994) as providing the most substantial treatment of the topic to date. Wenham concludes, 'the sufferings will end speedily and mercifully in the second death' (1974:78; cf. 1992). Conditionalism gained validity in evangelical circles through Clark Pinnock, Philip Edgcumbe Hughes, Stephen Travis, Michael Green and John Stott, (Linfield, 1994:65), although Stott and F.F. Bruce held it 'tentatively' due to 'a great respect for the longstanding tradition' (Stott, 1988:320; cf. Wenham (1992:166)

or ‘Gehenna’),[196] but quite natural to think of it as the result of judgement in an age to come (Wenham, 1992:175).

In his own analysis of the biblical data, Wenham concludes that of 264 NT references to the ultimate fate of the lost, only one (Rev 14:11) gives any indication of unending torment;[197] some are neutral, ‘and very many of them in their natural sense clearly refer to destruction’ (1992:174). Without the presumption of immortality, the conditionalist view is exegetically strong. Only once in the NT is the phrase ‘eternal punishment’ found, in a parable (Mt 25:46), yet the NT is rife with language and imagery of ultimate destruction (Milne, 2002:151): ‘whoever believes in him will not *perish* but have eternal life’ (Jn 3:16); ‘rather, be afraid of the One who can destroy both soul and body in hell (i.e. *geena*)’ (Mt 10:28). The antithesis of eternal *life* is not eternal punishment but eternal *death*. If death is interpreted in light of *geena,* the lake of fire, destruction is clearly implied, and that itself constitutes the eternal punishment. Conditional immortality thereby resolves the dilemma of eternal punishment in the new heaven and earth, without making any claim about the nature of eternal life.

The Views of Wright, Polkinghorne and Moltmann

For Wright, the arguments for conditional immortality do not appeal – nor do those of traditionalism or universalism. Wright’s concern is not for philosophical clarity but biblical validity. None of the arguments over immortality reference the resurrection or ‘the age to come’. He lays out clearly that ‘eternal life’ does not mean ‘continuing existence’. ‘It refers neither to a state of timelessness, nor simply to “linear time going on and on”’ (Wright, 2000b:34). In a brief treatment of conditional immortality, Wright finds little to disagree with apart from its failure to give sufficient value to passages that ‘appear to speak unambiguously of a *continuing* state for those who reject the worship of the true God’ (2008:182). Yet he gives no indication of what those passages are. Wright considers any arguments on immortality irrelevant to the qualitative state of resurrected life. ‘The view that every human possesses an immortal soul, which is the “real” part of

[196] Gehenna (*geena*) is regarded as Jesus’ metaphorical term for the lake of fire, the second death (Rev 20:14-15).
[197] Rev 11:14, ‘And the smoke of their torment rises for even and ever.’ Wenham compares this with two similar passages (Rev 19:3, 20:10) which refer to non-human or angelic beings. He interprets this as referring to the archetypal imagery of the OT destruction of Sodom and Gomorrah whose smoke was all that remained of its total desolation (1992:179).

them, finds little support in the Bible' (2008:28; cf. 2003:130). Like conditionalists he views God alone as immortal, pointing only to 'Christ Jesus, who has destroyed death and has brought life and immortality to light through the gospel' (2Tim 1:10). Immortality may be a characteristic of eternal life, but only in relation to Christ.

Unfortunately, this does nothing to explain the fate of the wicked. Wright dispatches both the universalist position on one hand, and a hell of eternal torment on the other (2008:177). But rather than assert conditionalist destruction, he instead offers an alternative view. In a strange departure from his usual steadfast adherence to Scripture, he suggests (with no biblical reference) that human beings who continue through life worshiping *other* than their Creator will gradually become more like whatever they worship:

> After death they become at last, by their own effective choice, *beings that once were human but now are not*, creatures that have ceased to bear the divine image at all. With the death of that body in which they inhabited God's good world… they pass simultaneously not only beyond hope but also beyond pity'… creatures that exist in an ex-human state, no longer reflecting their maker in any meaningful sense.' (2008:182-3, his italics).[198]

Wright admits that in this speculation he has wandered into unmapped territory, and 'should be glad to be proved wrong', yet nevertheless feels the NT texts require such a resolution. As there is no such description in the NT, one must assume the 'ceasing to exist' argument of conditionalism is somehow less acceptable to Wright than a shadowy continued but sub-human existence.[199] Ironically, he argues that God's utter commitment to setting the world right 'must necessarily involve the elimination of all that distorts God's good and lovely creation' (2008:179), yet he does not engage exegetically with the texts asserting human destruction or perishing. This inconsistency evokes issues which will emerge again in Wright's description of the intermediate state.

Polkinghorne likewise does not engage with the arguments of immortality, preferring like Wright to connect any notion of immortality to resurrected life. 'Christian hope of a

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[198] Wright is not alone in this speculation. Peter Kreeft (2003) describes a similar non-annihilation and non-immortality view: 'They no longer count. They are like ashes, not like wood. They once were fully human, fully alive, real men and women. But hell is a place not of eternal life but of eternal death. In Greek philosophy, souls cannot die. In Christianity, they can—in hell. Is this annihilation? No, it is death. Annihilation is the opposite of creation; death is the opposite of life.'

[199] Elsewhere Wright argues a very similar idea in the Jewish view of the intermediate state. The dead are 'held in some kind of continuing existence, by divine power rather than in virtue of something inalienable in their own being' (2003:203). They are in s*heol*, a temporary resting-place, waiting for the time of re-embodiment.

destiny beyond death… resides not in the presumed immortality of a spiritual soul, but in the divinely guaranteed eschatological sequence of death and resurrection' (2002a:108).[200] He holds the key biblical passage to be Jesus' conversation with the Sadducees (Mk 12:18-27) in which Jesus upholds resurrection and in reference to Abraham, Isaac and Jacob proclaims, 'He is not the God of the dead, but of the living' (v27). Polkinghorne sees this as a powerful claim which assures us that through God's faithfulness – not an inherent immortality - individual life continues beyond death. From the scientific viewpoint he grants, 'there is no natural hope of a destiny beyond death, a story that science could tell us… but that is not the only story to be told' (Polkinghorne and Beale, 2009:22). God has the final word, not death, as demonstrated in the resurrection of Jesus.

Regarding the fate of the unsaved after death, Polkinghorne is ambivalent, surmising, 'I do not think everyone's eternal destiny is fixed at death' (Polkinghorne and Beale, 2009:94);[201] yet neither does he advance a universalist view. Rather, he tentatively suggests the idea of divine judgement as a 'purgatorial process' rather than a verdict. Such a judgement would act as a revealing 'self-exposure' to our reality in the light of Christ, but would offer the possibility of cleansing, restoration and salvation (2002a:130-31). For those who stubbornly resist and refuse such a process, Polkinghorne remains torn between conditionalist annihilation, or a 'continuing existence' in self-determined opposition to God, akin to C.S. Lewis's *Great Divorce* or reminiscent of Wright (2002a:136-7).[202] He reaches no conclusion on this. Polkinghorne is far less concerned with immortality than with issues of continuity and discontinuity in the transition from this life to the re-embodied state of eternal life.

Like Wright and Polkinghorne, Moltmann starkly contrasts immortality of the soul with resurrected life (1996:65ff), thoroughly rejecting the former. He does however renew the terminology of immortality in a different sense, ascribing immortality 'not to a substance or some untouchable nucleus within us (such as the Platonic soul) but to the relationship

[200] For similar statements rejecting immortality: (1994a:163; 1995f:106; 2000e:951).
[201] See also Polkinghorne's lengthier discussion of God's redemptive grace and mercy projected beyond this life as an aspect of divine consistency and continuity beyond death. (2002a:127-8).
[202] Lewis's well-known novel (1945) suggests the inhabitants of a drab 'hell' there by choice, unable to accept or endure the bright reality of heaven. Polkinghorne gives a description of persons 'no longer fully human', not unlike Wright's, but in the context of the intermediate state rather than their eternal condition (see 2002a:108).

of the whole person to the immortal God'.[203] This becomes a central tenet of Moltmann's eschatological thinking:

> With God, we beings are immortal, and our perishable life remains imperishably existent in God. We experience our life as temporal and mortal. But as God experiences it, our life is eternally immortal. Nothing is lost to God, not the moments of happiness, not the times of pain. (Moltmann, 2004:108).

Moltmann calls this 'the immortality of the lived life'[204] derived in part from the German concept of *beseelten Leben,* the 'ensouled life'. It refers not to a static entity, but to a relational life open to happiness, suffering, love, and change. All of one's life history will somehow be restored in resurrection, an idea which poses new and challenging questions for continuity.

Unlike Wright and Polkinghorne, Moltmann does adhere to a universalist position,[205] asserting that not only death but hell itself has been destroyed by Christ's resurrection (2010:56).[206] He therefore does not share the theological challenge of explaining the fate of the unsaved, as all will eventually achieve salvation. Moltmann's universalism is oriented theocentrically rather than anthropocentrically (2010:148); it is not faith (i.e. free will and choice) that attains salvation, but God's work of grace ultimately reaching every person, since 'God has bound all men over to disobedience so that he may have mercy on them all' (Rom 11:32). Regarding biblical texts asserting opposing fates for the saved and unsaved, Moltmann claims 'the different biblical traditions about judgment cannot be harmonized' (2010:148) and justifies his stance on theological grounds.

This is disappointing for a theologian renowned for attempting to resolve other vexing biblical tensions. Post-mortem salvation is nevertheless a *process*. When and how this takes place prior to resurrection and eternal life is a formidable challenge for Moltmann's view of the intermediate state. Again, this raises new problems of continuity. But the

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[203] By this Moltmann means the entirety of a one's life and relationships: 'the whole configuration of the person's life, in space and time, that person's whole biography (2004:107).

[204] See discussion (1996:71-77). The key to Moltmann's thought here is the idea that true life is relational, based on communication, investment in the other, and most of all in reciprocal love. One's relational life (comprising the whole person) is the basis of immortality and must be transferred into the resurrected life.

[205] A tendency toward universalism can be found in many of Moltmann's works, but overtly in his recent writings (e.g. 2010:56-57, 142ff). 'Nonbeing has been annihilated, death has been abolished, sin – the separation from God – has been overcome, and hell is destroyed.' 'No one is 'damned to all eternity' anymore' (2010:57).

[206] For a more detailed articulation of Moltmann's views on hell and its ultimate non-substantive existence (1968b; 1997; 1999a).

central concept on which all three agree is the primacy of eternal life over any notion of innate immortality.

The Nature of Eternal Life

Jesus expresses the nature of eternal life in relational terms. He gives the most direct statement in his final prayer before his arrest: 'Now this is eternal life: that they may know you, the only true God, and Jesus Christ, whom you have sent' (Jn 17:3). He clearly associates eternal life with 'the coming age', not with heaven: 'No-one… will fail to receive many times as much in this age and, in the age to come, eternal life' (Lk 18:30). Biblically people may seek, inherit, be appointed to, receive, or be given, eternal life; all of these are relationally centred on Jesus. It is the gift of God (Rom 6:23), yet Jesus claimed God's authority to grant eternal life (Jn 17:2) in opposition to perishing. 'I give them eternal life, and they shall never perish' (Jn 10:28). He declared, 'whoever believes in the Son has eternal life, but whoever rejects the Son will not see life' (Jn 3:36). While not fully experienced until the coming age, by virtue of relationship to Christ it is immediately attainable. This brief overview demonstrates that eternal life in the NT refers not only to continuity of life in the age to come, but to a qualitatively new relationship based on belief and knowledge of the one who claims to be the source of life and salvation itself (Heb 5:9, Jn 14:6). 'He [Jesus Christ] is the true God and eternal life' (1Jn 5:20). This new relationship will be 'lived out' in the age to come.

Wright is adamant about this point. His hermeneutical agenda involves uncovering how the NT writings would have been understood and interpreted by both Jews and Christians within the first century context of their inception. He rejects the notion of eternal life as timelessness or unending duration:

> In its original Jewish context the phrase fairly certainly refers to 'the life of the age to come'… The life proper to the new age, the new *aiōn* in Greek, had already begun. The phrase 'eternal life' should not, therefore, be read as though it meant a spaceless, timeless existence. It should refer to a new dispensation which God will create in the renewal of all things. Perhaps we should translate *zōē aiōnios* differently, to make the point. (2000b:34-35)

Wright would prefer the clarity of 'resurrection life'; it would immediately correct a misplaced notion of 'eternity in heaven' with 'resurrected life in the coming age', which is precisely what he claims was intended by Jesus and Paul, and understood by the early

Christians.[207] On the surface this appears to lend strong support to continuity – but only in terms of humanity, the earth, and linear time. It leaves unanswered the question of individual continuity through death and the intermediate state into the resurrection of the 'age to come'.

Summary in Relation to Continuity

Wright, Polkinghorne and Moltmann all reject the traditionalist view of inherent immortality. Any notion of immortality is found only in relation to Christ and within the framework of eternal life, the embodied and resurrected life of the age to come. This provides a coherent explanation for those attaining salvation, but for those who do not, their views diverge with no resolution. All agree unreservedly that eternal life is not a disembodied life in a timeless 'eternity' but a resurrected and embodied life in the age to come. It refers to new life in relation to Christ, which begins in the present but reaches fulfilment in the new creation. The *nature* of eternal life in relation to the new the heaven and new earth remains to be explored, but the challenge of continuity for individual eschatology is one of transition. How does the individual move from the present to the future life? The present age may flow directly into the age to come, but the medium of passage for the individual is death and the intermediate state.

The Nature of Death

Death is the key feature of individual eschatology, signalling the end of present physical life and a transition to what lies beyond. The nature of that transition is addressed in the following chapter. But first there are vital questions about death which go beyond the basic meaning of 'cessation of physical life' and address the deeper aspects of human personhood as well as the broader questions of death in creation – and in new creation: questions of spiritual, anthropological, and even cosmological significance which relate directly to the ultimate questions of continuity and discontinuity, beyond the mere individual. Death for the individual is biblically linked to death in humanity, which in turn exists in the context of death throughout creation. Thus the nature and meaning of death carries far-reaching implications, vital in understanding the transitional intermediate state and the nature of eternal life. We will explore three key questions:

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[207] Wright cautions, 'we should not allow ourselves to be seduced by the language of eternity (as in the phrase "eternal life," which in the New Testament regularly refers not to a nontemporal future existence but to "the life of the coming age")' (2008:162-3).

1) What is the biblical meaning of death?
2) Is death a consequence of sin or a natural part of human life (and/or all life)?
3) What is the relationship between death and the new creation?

Each of these elicit complex answers which impact on the assessment of continuity and discontinuity. The first two will be explored here, the third only briefly, then more thoroughly in chapter 8 in relation to corporate eschatology.

The Meaning of Death

Death is commonly understood as the cessation of physical life (i.e. the physical body ceases to function).[208] Its end result is captured in the biblical statement, 'for dust you are and to dust you will return' (Gen 3:19). The problem of course is that human beings are almost universally considered to be more than merely physical organisms,[209] so the theological question is what happens to the human *person* when the body dies and subsequently, what is the relationship between the body and the person? The nature of human personhood is discussed at length in the following chapter. Here Peter Davids succinctly captures the two-stranded meaning of death:

> Death has preoccupied Christian thought for centuries, either in its physical aspects as the cessation of bodily life and how one ought to prepare for it or in its spiritual aspects as separation from God and how it may be overcome. (2001:324)

This spiritual aspect becomes the key to a much broader theological understanding. Davids builds this case further:

> If God is the source of all life (Rom 4:17), death must be the result of being cut off from God, a process which Adam began and in which every human being now participates… Death, then, is a power dominating the present life of the individual, not just something that happens at the end of life. It is in separation from God, a spiritual death, that people live all their life. (2001:325).

In abbreviated form then, death is 'separation from God, the source of life'. The eventual physical cessation of life merely completes the underlying spiritual condition; any hope of a bodily restoration lies first in overturning this spiritual state through the attainment of eternal life.

[208] There is no need to distinguish biological, neurological or physiological aspects of death, nor the problematic 'moment' of death. The critical issue is to recognise two aspects: physical and spiritual. Regarding the physical: 'Death is the absence or withdrawal of breath and the life force that makes movement, metabolism, and interrelation with others possible' (Ferguson, 1996:154).
[209] The exception is the reductionist materialist perspective suggesting that all human experience can be reduced to physical processes, e.g. 'we are nothing but our neurons'. For response see Judge (2010), Dirckx (2019).

Biblically death has two phases: the spiritual condition of death in present life is not absolute but rather *a state of estrangement* which, if not reconciled in Christ, leads not only to physical death but ultimately to the denouement of 'second death' (Rev 20:14).[210] Hope of avoiding this fate lies in spiritual reconnection to God 'the source of life' through Christ. Paradoxical statements such as 'count yourselves dead to sin but alive to God in Christ Jesus' (Rom 6:11); and 'God… made us alive with Christ even when we were dead in transgressions' (Eph 2:5), become comprehensible in this light.

The 'second death' – used only 4 times, all in Revelation[211] – leaves little margin for interpretational latitude. 'The lake of fire is the second death. If anyone's name was not found written in the book of life, he was thrown into the lake of fire' (Rev 20:14-15). Jesus frequently warns against such a possibility: 'It is better for you to enter life with one eye than to have two eyes and be thrown into the fire of hell' (i.e. *geenna*) (Mt 18:9). 'Rather, be afraid of the One who can destroy both soul and body in *geenna*' (Mt 10:28). Jesus' reliance on the metaphorical term *geenna* is most often regarded as a reference to this second death, associated with destruction.[212] The sequence of second death follows *after* resurrection and final judgement (Rev 20:12); subsequently death and Hades themselves are thrown into the lake of fire (Rev 20;13) resulting in 'the death of death' (1Cor 15:26).

In contrast, Moltmann asserts that death in the abstract is a 'lack of relationship' and is therefore incompatible with God's nature. He argues that God's very relationship to each individual is what the biblical tradition designates as the soul or spirit of that person; it is this essential relatedness which is immortal (1996:72-3). Death is therefore not the end of the whole person at all, neither for those who have recovered that relationship in life, nor for those who have failed. It cannot end in annihilation. 'Every life remains 'before God', Moltmann states, therefore 'God's relationship to people is a dimension of their existence which they do not lose even in death' (1996:76). This indissoluble relationship

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[210] Sloane connects the idea of 'condition of death' in present life to dementia. 'Death as a human phenomenon is much more than biological – it is essentially relational, disrupting that community with God and others that is the created goal of human existence' (2019:153).
[211] Rev 2:11; 20:6; 20:14; 21:8.
[212] The term is used 12 times in the NT, 11 by Jesus. Jesus' use of *geenna,* while metaphorical, refers to the final condition of hell rather than an intermediate state. Phillips (1996:339) writes, '*Gehenna* is the standard term for hell in the New Testament.' Related phrases include "punishment of eternal fire" (Jude 7), [and] "lake of fire" (Rev 19:29, 20:14-5). See Fudge's thorough exegesis of *geena*, associating it with destruction (1994:ch10).

means that death *cannot* separate one from God, nor in Moltmann's view should death be seen as the separation of the body from the soul.[213] He explains:

> Death has to be seen as a transformation of the person's spirit, that is to say his or her Gestalt and life history; and this means the whole person. Through death, the human person is transformed from restricted life to immortal life, and from restricted existence to non-restricted existence. Death de-restricts the human being's spirit in both time and space. (1996:76-7)

At this juncture Moltmann's view diverges significantly from a critical realist perspective; nor does it adhere to a particular biblical perspective. Rather he asserts that 'there is no 'biblical concept' of death' (1996:78) but a collection of testimonies leading to differing conclusions. He therefore pursues this theological formulation with minimal biblical grounding. While his focus on relationship is a valuable corrective to an overly individualistic view of existence, by defining the essence of the soul as 'relationship', he conflates the substance and the abstraction. A relationship is not a 'thing' in itself, but a bond or connection between two or more things. The soul cannot *be* the relationship or it loses its distinctiveness in relation to the individual person. On the other hand, Moltmann is correct in describing death as a 'lack of relationship', because human life can only be understood and fully lived in relationship. Yet the priority of Moltmann's universalism rejects any notion that this 'lack of relationship' could lead to permanent separation, suggesting instead the need for reconciliation and redemption beyond death.

Polkinghorne is more circumspect in departing from biblical tradition, but like Moltmann places a high value on the relationality of life, and thus its importance in continuity after death:

> We must recognise that the deep relationality of creation and the significant distinction between a human person (constituted in relationships) and a mere individual (treated as if existing in self-isolation), encourage a broader view. The 'pattern that is me' cannot adequately be expressed without its having a collective dimension… (2002a:109).

The 'pattern that is me' is Polkinghorne's language for the soul, to which we return later. He suggests, following Miroslav Volf,[214] that 'eschatological fulfilment must involve the mutual reconciliation of human beings' (2002a:109). Interacting with Moltmann's thinking, Polkinghorne agrees with the concept of an enduring communion between the

[213] Moltmann's view of the 'whole person' is assessed in the following chapter.
[214] Volf posits that any redemption is incomplete without redeeming the past, but 'dealing adequately with sins suffered and committed can only be a *social process*' (2000:262, author's italics). Therefore healing and reconciliation requires communal participation, a necessary element of post-mortem restoration.

living and the dead through a 'mediated relationship' in Christ, but is cautious about an active intermediate state. Theologically Polkinghorne prefers the NT metaphor of peacefully 'falling asleep'[215] to argue for a Christian acceptance of death as 'the final act in this world that expresses a commitment to trust in the faithfulness of God' (2002a:125). But for the unbeliever, rather than immediate or permanent 'separation from God', Polkinghorne holds open the possibility of a post-mortem turn to repentance and an opportunity (though not certainty) of responding to the gospel in the clearer light of Christ's presence.

Wright's extensive study on death in the ancient world (2003) offers additional insights, but Wright adheres closely to the biblical view. Physical death is 'part of the natural transience of the good creation' (2008:95), whereas spiritual death is a present state of being – which the Christian departs from in Christ (2008:14). Relationally, he posits the controlling image for death in the OT as 'exile', reflecting Adam and Eve's expulsion from the Garden (2008:95) and foreshadowing Jesus' parables of the wicked being cast out from the eschatological kingdom (e.g. Mt 25:30).[216] Although he does not definitively associate second death with destruction, leaving the fate of the non-redeemed somewhat unresolved, Wright emphasises the final defeat of death, giving way to the re-embodied life of resurrection.

The Cause and Extent of Death

The two-stranded meaning of death requires a dual assessment of continuity, one dealing with the physical, the other with the spiritual 'separation from God'. If death is a consequence of human sin, the discontinuity resulting from the 'corruption of the body' seemingly runs counter to God's initial design for creation and must ultimately be overcome in the new heaven and new earth. However, if death is a natural part of God's 'good' creation, then the spiritual 'separation from God' resulting from sin is a specifically human dilemma, a subplot within the continuity of creation to new creation. Death in creation should not then be considered a negative consequence of sin, but a

[215] See e.g. Act 7:60; 1Cor 15:6,18; 1Th 4:13,15.
[216] 'And throw that worthless servant outside, into the darkness, where there will be weeping and gnashing of teeth' (Mt 25:30; cf. 24:51, 25:11-12).

positive aspect of God's creative process.[217] The connection between sin and death in humanity is a core Christian doctrine based, according to Millard Erickson, on the universality of sin as assumed and affirmed throughout Scripture, and sin's consequential result in death (1985:624).[218] 'All have sinned and fall short of the glory of God' (Rom 3:23) and 'the wages of sin is death' (Rom 6:23). However, this so-called universality is rarely explored beyond humanity; Erickson's detailed systematic theology makes no mention of animal death.

The long-standing Christian tradition assuming that *all* biological death in the world came about through Adam's sin is remarkably without basis. One sees the foundation for such an assumption in the sweeping statements of numerous theologians and biblical scholars. Oscar Cullman writes,

> Death is not something natural, willed by God, as in the thought of the Greek philosophers; it is rather something unnatural, abnormal, opposed to God… it came into the world only by the sin of man. Death is a curse, and the whole creation has become involved in the curse. (1958:28).

Bruce Demarest asserts on the basis of Gen 3:17-18 and Rom 8:20-22, 'The fall's effects impinge even upon the inanimate creation… the entire material universe languishes in a state of dysfunction. The effects of the fall… are truly cosmic in scope' (2001:436). A careful reading of the text finds that Cullman overextends the scope of the curse. Death is pronounced on Adam and Eve (Gen 2:17, 3:19), and the ground is cursed because of them (Gen 3:18), but death is not the curse, nor does 'involvement' in the curse imply death. Demarest more accurately emphasises the general *effect* on creation rather than specifying death, but this too overreaches. Nowhere does 'the fall' or 'the curse' mention all of living creation, let alone the entire material universe. The key NT passage (Rom 8:19-21) *does* speak of all creation, but not in terms of death, rather 'frustration' and 'decay'.[219]

Prior to the advent of a scientific account of life on earth, such a theological misconception might be overlooked. But theologians have been slow to correct this view,

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[217] An important doctrine of Christianity is the 'goodness' of original creation. As Erickson states, 'Although sin may well have disturbed the universe God created, the world was good when it came from his hand' (1985:385).

[218] Augustine distinguished between the death of the body and eternal death – both deriving from sin. The Council of Orange (AD 529) declared sin as the death of the soul: the first penalty being death of the body, the second eternal death. See Moltmann (1996:86).

[219] This passage is of great eschatological importance, and its varying interpretations are assessed in chapter 8. The point here is merely to establish that there is no reference to creation being made subject to death nor of being liberated from death. Thus Rom 5:12 likewise refers to humanity.

with notable recent exceptions.[220] Apologist John Lennox gives a rare example of grappling with this issue from a biblical perspective, in reference to Rom 5:12:[221]

> [Paul] says that death passed upon all *human beings* as a result of Adam's sin; he does not say that death passed upon *all living things.* That is, what Scriptures actually says is that *human* death is the ultimate wages of moral transgression. We do not think of plants and animals in terms of moral categories… Paul's deliberate and careful statement would appear to leave open the question of death at levels other than human. (2011:78)

Lennox goes on to build the case that prior to human sin and the curse, plant life had been designated as a food source (entailing its death), and the entire spectrum of animal creation required eating vegetation or other living creatures – predator and prey created in relationship. Death was from the beginning a part of the natural order. Likewise, Rom 8:20-21 indicates decay and corruption, not the fruitful cycle of death and reproduction.

From a scientific perspective, this was never in doubt, and those in the science-theology dialogue have led the way in overturning this 'traditional' theological understanding. An evolutionary account of creation recognises death as universal – not only amongst humans, but in all living organisms – and intrinsic to the nature of life on earth. So well attested is this view in every area of science that there is little need or desire to engage in theological dialogue, it is simply accepted fact. The absolute consensus of science is that death has always been intertwined with life, not since humans came into the picture, but for billions of years since the advent of life on earth. The importance of the above discussion is that even *without* adopting an evolutionary account, there is biblical and theological validity in separating the two strands of death in both cause and extent.

Polkinghorne recognises the theological challenge this poses and writes in response to the traditional view:[222]

> With our evolutionary understanding of the history of terrestrial life and of hominid origins, we can no longer hold this view literally in relation to the fact of physical death… The episode that theologians call the Fall… can then be understood as a turning away from God into the human self... alienated from the divine reality. This was not the cause of physical death but it gave to that experience the spiritual dimension of mortality. (2002a:126)

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[220] See e.g. Berry (1999), Linzey (1994:85), Osborne (2014), Noble (2008), Sollereder (2019), Southgate (2008).

[221] 'Therefore, just as sin entered the world through one man, and death through sin, and in this way death came to all men, because all sinned…' (Rom 5:12).

[222] For a more detailed account of his theological position contradicting a 'Fall': (1991:99ff; 2010a:28ff).

Here Polkinghorne asserts the value of the scientific insight. 'The gift that science offers to theology is, I think, the insight that we live in an evolutionary universe' (1995e:24-5). This applies equally to biological evolution, where death is intrinsically part of the mechanics of evolutionary development. 'In an evolving world of this kind, death is the necessary cost of life; transience is inevitably built into its physical fabric' (2000a:39). There is no need to interpret death as extending outward from humanity to the rest of creation.

Moltmann fully concurs, posing the question, 'did the dinosaurs become extinct because of the sin of human beings who did not yet exist?' (1996:83). He rejects the notion that death as 'the wages of sin' can be ascribed to fellow non-human creatures, but interestingly brings the sin of angels into the discussion adding, 'there is sin without death in creation [angels], and death without sin [animals]' (1996:90). Moltmann does not disagree with the evolutionary account of science, but prefers to articulate his understanding of creation as a process in which 'God continuously creates something new, and develops what he has already created… [such that] continually new forms of life emerge' (1990:301). Elsewhere he describes creation as an 'open system' (2003:ch3). Wright likewise frames a parallel understanding not in evolutionary terms but in relational freedom and love. 'That same love then allows creation to be itself, sustaining it in providence and wisdom but not overpowering it' (2008:101).

The important insight which Polkinghorne, Lennox and Moltmann each draw out from their own perspectives is that physical death is *not* the consequence of sin, neither for animals *nor* for human beings.[223] The evolutionary perspective of science does not allow for such an interpretation, and crucially, the biblical interpretation does not require it.[224] But the consequence of such a view runs contrary to the traditional interpretation of the 'fall' in the biblical narrative. James Barr expresses this divergence, proposing that the story is not primarily about the origin of sin and evil, but 'a story of how human immortality was almost gained, but in fact was lost' (1992:4). The biblical evidence he sees as straightforward. The singular reason why Adam and Eve were expelled from the

[223] For Moltmann's discussion on this point see (1996:88; 2000b:239ff), and Lennox (2011:81).
[224] This idea raises the question of what would have happened to Adam and Eve had they *not* sinned? Two possibilities ensue: a) they would eat from the tree of life, gain eternal life and be 'transformed', no longer subject to physical death; b) they would gain eternal life, die physically and (like Christ) be transformed through resurrection. Erickson suggests the first (1985:1171). Both achieve the same end but are purely speculative and need not factor into the discussion.

Garden was not for punishment, unworthiness or alienation, but because 'if they stayed there, they would soon gain access to the tree of life, and eat of its fruit, and gain immortality: they would 'live for ever' (Gen 3:22)' (1992:4). The central theme of the passage Barr claims, is not sin, but death. The death they experienced immediately was that of spiritual alienation. Physical death was not mentioned in the terms of the curse because mortality was already the natural state of humanity (1992:21).[225] It was an opportunity lost, rather than a fall from immortality to mortality. From this Barr concludes, 'the loss of potentiality is all that 'Fall' was ever intended to mean' (1992:93).

Death in the New Creation

The question of death in the new creation may seem out place. Surely the overriding principle of the new creation is seen in the statement, 'There will be *no more death* or mourning or crying or pain, for the old order of things has passed away' (Rev 21:4, my italics). However, based on the preceding arguments, 'death' in this passage cannot suddenly and unconditionally be interpreted in reference to *all* life. Non-human physical life must be understood separately from human life, physical death from spiritual death. A strong consensus has emerged that physical death prevailed in God's 'good creation' – the 'old order' – before the advent of sin and the curse. Physical death – certainly for animals and, as argued above, for humans as well – was *not* caused by sin. On what basis must it then be overturned in a 'new order'? The new order could potentially involve an end to all physical death and a 'transformation of matter',[226] or it could mean nothing of the sort, referring rather to a new order of relationship between God, humanity, and the earth – the very relationships degraded in the curse. At this point the only conclusions to be made about death in the new creation derive solely from the analysis of the individual eschatology of human beings. Moltmann's assertion (based on Rev 21:4) that 'we may assume that all death will be expelled from God's new and transfigured eternal creation – not merely the death of human beings but the death of all living things' (1996:91), is most

[225] One might equally posit (e.g. Demarest, 2001:435) that Adam and Eve, representing a nascent humanity, were placed in the garden neither confirmed in a state of righteousness (resulting in eternal life), nor yet in a state of sin and corruption (resulting in death). Choice was the key. Erickson holds to this view, concluding that '[Adam] was created with contingent immortality' (1985:1171). Either way the term 'fall' is misleading.

[226] A reference to Polkinghorne's view that the matter of the new creation will be the transformed and glorified matter of the old (1996b:73).

certainly premature. The continuity or discontinuity of death in the non-human aspect of the new creation remains to be seen.

Even for human beings, the issue is not straightforward. The preceding arguments reveal that while physical death prevails in the present, death as a 'spiritual condition of separation from God' *may* be overcome through Christ and the gift of 'eternal life', in which case the second death has no power in the new heaven and earth. Embodied life is restored through resurrection. But does the condition of death continue into the NHNE for those who *fail* to attain eternal life and are not resurrected? If death itself is 'thrown into the lake of fire' (the second death), then the spiritual condition of death (i.e. separation from God) is either annihilated or made permanent. If the latter is true, then this condition continues even in the NHNE and cannot be dismissed. There is no consensus on this amongst the three representative voices,[227] although this is precisely the point at which Rev 21:4 *should* be employed as a hermeneutical key principle. Finally, the question of continuity remains to be answered. The physical body dies, but how does the immaterial aspect of the human person progress from physical death to re-embodied eternal life? We must now assess to what extent the immaterial aspect, (i.e. 'the soul') maintains identity and continuity through death into the intermediate state.

[227] For Moltmann there will be no one left in a condition of death, Polkinghorne is undecided, and Wright proposes a modified form of eternal separation contradictory to the 'lake of fire' imagery.

Chapter 5
Issues of Continuity in Individual Eschatology

'The grave below is all astir…'
Isa 14:9

Introduction

Chapter 3 proposed three distinct meanings of the term *heaven*: God's dimension of present reality; the temporary dwelling place of humans after death; the future new heaven and new earth. We now explore the second in greater depth. We established that the Bible does not use the term 'heaven' in this way and that whatever happens after death is a prelude to the final state in the new heaven and earth. Rather than calling this 'heaven' then, we use the theological term 'intermediate state'. Transition from death to intermediate state is controversial in two key respects: first, the nature of personhood which continues through the discontinuity of death; second, the nature of the intermediate state itself. Individual eschatology addresses these challenges of life after death prior to the corporate eschatology of the final state, which Wright calls 'life *after* life after death' (2003:86). This assessment of transitional continuity is critical to the understanding that individual identity and personhood will somehow be maintained in the future new heaven and new earth.

Human Composition and Personhood

In order to properly examine various views on the intermediate state, the nature of the human being passing through death and into that intermediate state must be clarified, and this raises the question of human composition and its terminology: body, soul, spirit, person, self.

Terminology of 'Soul'

The first problem is one of terminology. While some contest for a tripartite division of body-soul-spirit, others appeal to a body-soul dualism or a monistic unity.[228] In each of these cases, the term *soul* is used and understood differently. In Platonic terminology, the

[228] Millard Erickson offers an excellent synopsis of these views in the history of Christian theology (1985:ch 24), which he terms *trichotomism*, *dichotomism* and *monism*. He also suggests a fourth alternative: *conditional unity* – in which the 'normal' state of man is a material and unitary being. (1995:536-9).

soul is the immortal component of the person which exists both before and after death; in monistic terminology the soul is the whole person. This linguistic confusion is not new. Bowker points this out in reference to the Hebrew to Greek transition in biblical language:

> Once the language of *nephesh* and *ruach* (life and breath) were [sic] being written in Greek… the possibility of Greek philosophical reflection became obvious, because a Greek reader would see such familiar words as *psuche* and *pneuma*. (1993:63).

His point here is that this simple linguistic transition paved the way for speculation that the soul or spirit 'might be a self-sufficient reality' (1993:63) even if, in Christian neo-Platonism, it would require reconnection to the/a body for its full expression.[229]

Polkinghorne chooses to retain the use of the term 'soul' over 'person' or 'self' because he desires to 'retain some contact with the theological thinking of earlier generations' (2002a:51). Yet he describes the soul as a psychosomatic unity, the 'real me'. For the sake of maintaining as much clarity as possible, I will generally use 'person' in reference to the unity of human composition, and 'soul' and 'body' only when distinguishing between material and the immaterial components.

The Biblical Context

Wright's detailed study on death and the afterlife in the ancient world highlights both diversity and progression as historical Jewish concepts develop into the beliefs of NT Christianity.[230] The OT picture of life after death was vague and undefined. Wright notes that 'much of the Old Testament is not concerned with life after death at all' (2003:87); yet as he traces the nascent beliefs of death and *sheol* (the realm of the dead) into the more complex views of the second-temple period and early Christianity, nowhere is there an implication of body-soul division. Rather there is general agreement that both the Jewish and early Christian (non-Hellenistic) view of 'soul' was in respect to the essential unity of the whole person.[231] Hans Küng explains, 'what lives on is certainly

[229] Philo offers an example of this tendency: 'A holy soul is divinized by ascending not to the air or to the aether or to heaven which is higher than all, but beyond the heavens; for beyond the cosmos there is no place but God' (from *Questions on Exodus 2.4* as quoted in Bowker, 1993:65).

[230] Wright (2003) impressively surveys the range of belief about the dead in the classical world as well as Jewish beliefs from Patriarchal to early NT times. For comparison see Johnston (2002), Fudge (1994), Milne (2002), Atkinson (1969).

[231] Joel Green explains the Hebrew depiction of human beings as not *possessing* a body and a soul but *being* body and soul. Thus 'the problem of articulation, acute in the New Testament, is less pressing with reference to the Old Testament' (1998:154).

not only the 'soul' of the person in Plato's sense… but the one whole human being' (1984:108). Yet after death, the 'person' enters a shadowy, less substantial existence. Bowker paints this picture:

> At the most, a thin, insubstantial shadow of a person might continue… without any power or form through which to enjoy a continuing life. In Greece, Mesopotamia, India, China and perhaps most familiarly in Israel, the earliest beliefs in life after death were beliefs in the persistence of perhaps some trace of the dead, but of no substantial continuity. (1993:30)

How such existence can be described as 'whole' or 'person' yet without the body is the particular challenge of the OT Jewish understanding.[232] Küng explains that such existence was no longer the living person, but only 'the 'shade' that has broken away from the person and yet remains tied to the grave… Grave and underworld merge into one another' (1984:109). Wright likewise finds description elusive, drawing together biblical language for both *sheol* and its inhabitants:

> [Sheol] denotes a place of gloom and despair, a place where one can no longer enjoy life, and where the presence of YHWH himself is withdrawn. It is a wilderness: a place of dust to which creatures made of dust have returned. Those who have gone there are 'the dead'; they are 'shades', *rephaim,* and they are 'asleep'… It is not another form of real life. (2003:88-9)

The ancient Jewish view then, advances the strange incongruity of a 'person' who is no longer a living person, but carries the identity of that living person into a shadowy and undefined underworld existence. As Erickson remarks, 'it is peculiar to think of a human being apart from a body and to use the word *person,* or some similar term, to refer to an immaterial aspect of man' (1985:533); yet he agrees and ascribes this to the oddity of religious language. There seems then no essential continuity of substantial human *life,* but continuity of an insubstantial existence.

This belief had modified considerably by Jesus' time. Jesus' story of Lazarus and the rich man (Lk 16:19-31) reflects a more defined concept of *sheol / hades* and a stronger continuity of identity after death. The bipartite or tripartite division of human composition may be a later development of Christian theology, but not without biblical foundation. 'That soul and body can be distinguished is a biblical idea, as Christian

[232] Wright comments, 'It is natural for us to use the language of separation of body and soul, in order that we then have a word available to talk about the person who is still alive in the presence of God while the body is obviously decomposing. But we should not think of the 'soul' as a 'part' of the person that was always, so to speak, waiting to be separated off, like the curds from the whey' (2000b:49).

tradition has consistently affirmed' (Milne, 2002:168).[233] Blocher is equally adamant on this point:

> The duality of soul/spirit and of body which is peculiar to human nature belongs to the propositions of Biblical anthropology… Duality stands out unambiguously in the New Testament, just as it does in the Judaism of that period. (1984:87-8).

However, caution is required here. Recognising a biblical *distinction* between body and soul (Milne) is not the same as suggesting that a material/immaterial or body/soul duality supersedes the biblical unity of the whole person or defines existence after death. This is the subject of ongoing theological debate, frequently resting on exegetical and translational disagreement.[234] The same Greek words for body, soul, spirit, and flesh may be understood quite differently (and legitimately) through either more Hebraic or more Hellenistic Jewish understandings, as both existed at the time; thus the 'sense' of these NT terms is often at issue in scholarly debates.[235] Clearly however, the biblical perspective recognises some manifestation of existence continuing after death, but without the body in its present physical form.[236] As Wright points out however, this is of quite minor importance in the NT in relation to the heavy emphasis on future resurrection. (2003:209).

The Theological Perspective

Erickson's careful overview of the major theological positions on human composition contrasts trichotomism, dichotomism and monism, affirming dichotomism (or 'dualism') as the most widely held view in Christian tradition.[237] Dualism asserts that the human person is comprised of a material component (body), and an immaterial component (the soul or spirit). This is the position depicted in the Westminster Confession: 'Beside these

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[233] Milne here references Mt 10:28, Rev 6:9, 20:4.

[234] In addition to the Hebrew-Greek-English issues, a German-English dilemma arises in translating Moltmann. Margaret Kohl points out for example that 'Seele' and 'Geist' have a single German sense but are differentiated in English. 'Seele' can be soul, mind, or psyche, 'Geist' can be spirit or mind. (Moltmann, 1985:255).

[235] Green observes that Judaism of the time was not monochromatic but had intermingled and co-existed with Hellenism for three centuries, encompassing a continuum of conceptual ideas (1998:159ff). On the question of anthropological monism or dualism, 'the traditions informing the New Testament writers are more variegated than normally thought' (1998:172). NT terms may likewise be understood from multiple perspectives.

[236] Green asserts that even in Greek dualistic thought the 'soul' was not immaterial. It was not the same as body, but still composed of 'stuff' and occupied space (1998:160).

[237] Erickson (1985:521-2). In trichotomism humans are composed of three elements: body, soul, spirit. Monism sees the human as an indivisible whole. Dichotomism emphasises the material and immaterial components.

two places [heaven and hell], for *souls separated from their bodies*, the Scripture acknowledgeth none' (1990:97 my italics). Contemporary theologians argue that dualism originated as a compromise with Greek philosophy but strayed too far from the biblical depiction of a unified person.[238] For this reason, Erickson gives special attention to monism, comparing it to the biblical view of personhood:

> Monism insists that man is not to be thought of as in any sense composed of parts or separate entities, but rather as a radical unity. In the monistic understanding, the Bible does not view man as body, soul, and spirit, but simply as a self. (1985:524)

Yet he contends that monism itself arose as a reaction against liberal theology's acceptance of the immortality of the soul, concluding that the pendulum swung too far – beyond the biblical unity of the person to an artificial 'non-distinction' of body, soul, and spirit.[239]

Identifying deficiencies in each of the traditional positions, Erickson offers instead an alternative model of human composition he calls 'conditional unity':

> According to this view, the normal state of man is as a materialized unitary being… The monistic condition can, however, be broken down, and at death it is, so that the immaterial aspect of man lives on even as the material decomposes. At the resurrection however, there will be a return to a material or bodily condition. (1985:537)

He offers the analogy of a chemical compound with particular characteristics which can nevertheless be broken down into its components (as table salt in water) and recombined. An important consequence of this view is the possibility of an intermediate state. A person may therefore exist in either a 'materialized or an immaterialized state', without denying the essential unity, therefore accommodating the possibility of post-death, pre-resurrection existence.[240] Monism for Erickson is too absolute, forcing a rejection of any such intermediate existence.

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[238] Moltmann asserts that the tendency to spiritualise the human soul separately from the body was so profoundly embedded in Western thought that it was difficult to free one's thinking from it (1985:247); yet today the entire science-theology debate has shifted toward monism.
[239] Details of this debate go beyond the scope of this thesis, but Erickson identifies two problem categories. Biblically, the language of *sarx* (flesh), *sōma* (body), *psychē* (soul), and *pneuma* (spirit) does not translate into clear categories of material and immaterial. Philosophically/scientifically, objections to a compound human composition include consciousness being dependent on the brain, personal identity being dependent on the body, and human behaviour being closely tied to physical interactions.
[240] A few scientists hold this view but Siemens (2005:187-88) claims as a dualistic neuroscientist to be in a small minority. Many theologians have adopted, for scientific credibility, the more monistic position of 'non-reductive physicalism' (see Brown et al. 1988).

Moltmann upholds what at first glance appears a strongly monistic position:

> In this divine history, the human being always appears *as a whole.* Soul and body are not analysed as a person's component parts…. We are told that 'man became a living soul' (Gen 2:7 AV). He does not *have* a soul. He *is* a living soul… Nor does he find in his God any opportunity for withdrawing to an immortal, spiritual substance, so as to surmount the happiness and pains, life and death of his body. He can only appear before God as a whole. (1985:256-7)

Body, mind and soul are not component parts for Moltmann, yet in recognition of the changed state after death, he asserts that 'the person is always affected as a whole, though he assumes a different specific form in different relationships' (1985:256).[241] In typical fashion, Moltmann redefines the question of human composition, refusing to debate the primacy of body or soul, appealing instead to the *Gestalt,* i.e. 'the configuration or total pattern of the lived life' (1985:259).

As seen previously Moltmann identifies the person first and foremost as a relational being – not only in relationship to others, but in relationship to nature and a part of nature. 'Persons are not individuals; they are beings in community, and they live in community with one another, in the community of the generations, and within the community of creation' (2004:114). Consequently, it is meaningless to speak of an individual soul's continued existence after death. 'The soul separated from the body is not a person' (1996:101).[242] Moltmann views the entire 'body-soul person' in a different way, expressed in terms of a unity of life and love rather than component parts:

> Human life is completely human when it is completely alive. But human livingness means being interested in life, participating, communicating oneself, and affirming one's own life and the life of other people… It expresses itself in life that is fully lived because it is life that is loved. (2004:105)

One might interpret this as denying any possibility of a continued existence in an intermediate state and expressing only the resurrected life in the new heaven and new earth, but this is not Moltmann's intent. Rather, he contends that the post-death state must encompass the entire *Gestalt* of the person holistically, through 'the relationship of

[241] This is remarkably similar to Erickson's explanation: 'Death is not so much the separation of two parts as the assumption of a different condition by the self' (1985:538).
[242] He is not denying the continuing existence of the *person*, but of an individual disembodied soul. Moltmann's understanding of the body-soul relationship is 'a *perichoretic* relationship of mutual interpenetration and differentiated unity (1985:259). The whole body-soul person continues after death but in different form.

the whole person to the immortal God' (2004:105).[243] In this theocentric view, there is no barrier preventing the present life of the whole person continuing (without material form) in a spiritual dimension after death, in 'an enduring and indestructible community of the living and the dead' with Christ (1996:106) while awaiting resurrection.

A Scientific Perspective

The scientific concern regarding human composition, reflected in Polkinghorne's unique approach, is focused more on matter – the "stuff" of creation, as he often refers to it. In contrast to Moltmann, Polkinghorne is concerned about the continuity of the material substance of the person.[244] He is by no means a reductionist,[245] and his interest in matter should not be construed only in the narrow sense of *material*, but in the broader sense of everything in the created world – including the *whole* human person – thus his use of the indefinite term "stuff", leaving aside the secondary issue of what precisely that may be. He identifies as an issue of serious concern the nature of the human person and the related question of 'what could constitute the preservation of human identity in circumstances that go beyond those able to be discussed in terms of observed bodily continuity' (2002a:50-51).[246]

First, Polkinghorne views the person as a 'psychosomatic unity'. By this, he means, 'a kind of "package deal" of the material and the mental and spiritual in the form of a complementary and inseparable relationship' (2005a:46). Like Wright and Moltmann, he does not accept classical theology's view of a body-soul duality,[247] but uses the term *soul*

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[243] 'What emerges for human beings from this special loving relationship between God and themselves is what Moltmann calls 'life' or 'soul' or 'spirit' (2004:106). For a further development, see (1996:71-77; 2004:ch7).

[244] In the extreme Moltmann asserts, 'The human being really has no substance in himself; he is a history' (1985:257).

[245] A reductionist interpretation is offered by Siemens: 'Contemporary neuroscientists commonly believe that soul is no more than a set of functions of complexly organized matter, that is, the brain and its associated organs, affected by the social environment' (2005:187).

[246] This is such an important question for Polkinghorne that he deals with the nature of the human being and the 'soul' in virtually all of his works, usually in relation to eschatology. The terms 'psychosomatic unity', dual-aspect monism, and the metaphysical system they portray are explained and developed in numerous works, demonstrating the value Polkinghorne places on this conceptual scheme for understanding both human composition and the world generally. Cf. (1988a:ch 5; 1994a:ch9; 1995f:ch 8; 1998e:54-55; 2000a:39; 2002a:ch9; 2002b:51-55; 2005a:34-7, ch 3; 2005c:32; 2008:ch 4; 2010b:ch3; 2011:103ff).

[247] Polkinghorne agrees with Jeeves' that 'body/soul dualism… cannot be ruled out on scientific grounds' (2001:71). Many scientists assume that mind and soul are nonmaterial entities interacting with the body. Rather, he rejects dualism on theological grounds and for not providing the 'best explanation' of epistemology modelling ontology. Cf. Polkinghorne (2005a:46) and discussion (2002a:103-4).

to imply a holistic concept of the person, self, or 'the real me' (2005a:47). Likewise, he also rejects strict monism, preferring a modified view he calls 'dual-aspect monism':

> This strategy assumes that there is just one sort of world 'stuff', one substance, but it occurs in different forms of organization that give rise to the material and mental poles of our experience. A physicist might draw an analogy with the solid, liquid and gaseous phases in which a single kind of matter can be encountered. (1998e:54).[248]

He desires to treat with an equal degree of seriousness the evolutionary origin of human beings, as well as their unique non-material qualities of self-consciousness, moral and spiritual awareness, and active agency. He thus describes human composition as dual-aspect or bipolar: the material pole (embodiment), and the mental pole (the noetic world, or the life of the mind).[249] But these are not to be thought of as two dissimilar components, but two aspects of the same substance of creation. He describes humans wryly as 'mind/matter amphibians' participating in both worlds but also sharing both of those worlds with other entities (2005c:33).[250] In fact, Polkinghorne describes these as 'two poles of the world's reality' (1998e:55), implying that human composition mirrors the composition of creation itself.

Second, Polkinghorne relates this concept back to 'psychosomatic unity' and answers the question of how this unity can be preserved through death. He posits the view that the soul might be conceived as 'an information bearing pattern',[251] though one of nearly infinite complexity. Careful to point out that the material aspect of the self is in constant flux,[252] he addresses the metaphysical question of what it is that carries one's identity through life: 'The atoms that make up our bodies are continuously being replaced in the course of wear and tear, eating and drinking. We have very few atoms in our bodies that were there even two years ago' (2002a:105). However, the pattern 'persists through the continuously changing flux of atoms through [the] body' (1995f:106). Nor is it static itself but is continuously modified through the dynamic of our living history. The information-bearing pattern must be rich enough to incorporate memories and

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[248] This is a simplified analogy: 'Something infinitely more subtle must be involved in the interrelationship of the material and mental phases' (Polkinghorne, 1995f:55).
[249] He uses the term *mental* 'in the widest possible sense to embrace even what in other terminology might be called spiritual' (1988:76).
[250] He postulates that other entities in the noetic world would include the abstract notions of mathematics (which are 'discovered' not invented) as well as other active intelligences, traditionally angels. (1988:76).
[251] This idea features frequently: (2002a:105ff; 2002b:51ff; 2005a:47-49).
[252] Polkinghorne refers to C.S. Lewis's beautiful analogy of the flowing picture of human identity: 'I am in that respect, like a curve in a waterfall.' Lewis (1960:155).

accumulated character traits and personality 'together with all else that constitutes me as a person' (2011:105). Polkinghorne views this information-bearing pattern as the human soul which then perseveres through death.

Finally, he applies this pattern-based continuity to the re-embodiment of the resurrection. Like Moltmann, Polkinghorne is keen to maintain that the pattern of the individual's identity cannot be independent of external relationships.

> The pattern that is me must include those relationships that do so much to make me what I am, and also it must express the nature of my unique creaturely relationship with God… It would seem a coherent hope that this vastly complex pattern that is a human person could, at death, be held in the divine mind to await its re-embodiment within the life of the world to come. (2000a:39)

By postulating not just the matter-energy pattern, but the pattern of information intrinsic to the mind (relationship, memory, history, etc.) as dual-aspects of the soul, Polkinghorne is able to posit a retention of the entirety of one's experience of personhood through death, and into the new creation.[253] The pattern of the person is 'dissolved at death' but 'remembered by God and reconstituted by him in … the transmuted environment that is the redeemed universe, the new heaven and the new earth' (1995f:106). Polkinghorne recognises the incompleteness of his view, which he presents as 'far from fully articulated' (2011:66).[254] Yet he is strangely equivocal on whether being 'remembered by God' is merely passive, or possibly a more dynamic interaction with God, and in this regard contrasts sharply with Moltmann's view of the intermediate state.[255]

Human Composition in Science-Theology Dialogue

Human composition and the nature of 'personhood' remains a topic of lively debate in science-theology dialogue due in part to ongoing developments and debate in the

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[253] Influenced by Moltmann's relational emphasis, Polkinghorne has developed a nascent 'collective dimension' of the individual's information-bearing pattern in recognition of the corporate concept of the 'body of Christ' and the need for mutual reconciliation and social healing in the new creation: (2002a:109; 2002b:52).

[254] Dual-aspect monism is assisted by the scientific recognition of a duality between energy and information, but he sees this as only a glimmer of a functional description of its application to mental/material complementarity. 'It is clear that an immense expansion and enrichment of the concept of 'information' would be necessary before it became relevant to the complexity of human personhood' (2011:66).

[255] Polkinghorne normally refers to the pattern 'held in God's mind' as merely the 'carrier of human identity, linking this world to the world of the life to come' (2002b:52). But in a puzzling way, he leaves open the possibility that this is not merely a passive preservation. 'We may expect that God's love will be at work… purifying and transforming the souls awaiting resurrection in ways that respect their integrity' (2002a:111).

underlying disciplines.[256] The issues are only indirectly relevant to life after death, are often complex, highly nuanced and run along different lines which move well beyond the scope of this thesis. A brief overview of the key positions is nevertheless important in determining where Moltmann and Polkinghorne stand within the general trajectory of their respective disciplines, or whether their views are unique – or perhaps even opposed to the general consensus – if indeed there is a consensus to be found. The previous sections have focussed on the term 'soul' and the nature of life after death, but the broader science-theology discourse focusses equally on the physical body and its relationship to the non-physical aspects of the human being in present life. This is often expressed as the 'mind-brain problem' and includes the related issue of whether consciousness is generated by the brain. If the non-physical 'mind' is generated by functions of the physical brain, or can be shown to be dependent on the brain, it strengthens the argument that all non-physical aspects of personhood are dependent on the physical, thus conscious life or identity after death is untenable, and even the suggestion of a future re-embodiment in the new creation faces serious challenges of discontinuity.

Is human personhood defined by embodiment? As Polkinghorne has stated, 'We have good reason to consider human beings as psychosomatic unities and, therefore, to believe that it is intrinsic to humanity to be embodied' (2004:154).[257] Moltmann sees embodiment as the goal of all God's works: in creation, reconciliation, and redemption (1985:245). Virtually all theologians agree in relation to the resurrection.[258] Yet prior to this ultimate goal, both Polkinghorne and Moltmann have nevertheless found means of expressing a continuity of existence after death (even if manifested as not fully human) in accord with the biblical record. Science-theology discourse however is generally framed around the question of 'physicalism' (rather than 'monism') and the extent to which the

[256] Neuroscience in particular has added new dimensions to the discourse in terms of the mind-brain problem, consciousness, and memory, and theologians have not been slow to respond in kind. The field of psychology has also experienced a 'cognitive revolution' (Jeeves, 2001:71). Yet debates within each discipline are without the structured guidelines of established science-theology dialogue.

[257] Most in the science-theology dialogue agree with this sentiment. Keith Ward writes, 'The soul… is embodied and that is its proper form' (1998:148); the debate is whether embodiment is limited to the particular form of the present earthly body. Ward suggests an 'analogous form of embodiment' would be required for communication or human interaction in an intermediate state (1998:148-9). Cf. Ward (1992:147-8).

[258] Green for example identifies the 'profound continuity' between life in the present world and eternal life with God, but expresses this in terms of the 'transformation of the body' in resurrection. (2004:97).

physical body/brain can be seen as the dominant or controlling aspect of human composition.

Rapid advancements in the field of neuroscience have brought about significant developments and stimulated new debate regarding relationships between brain and mind, mind and body.[259] For many scientists and philosophers this has led to a marked shift towards 'reductive physicalism' which suggests that the mind is reducible to the physical processes of the brain.[260] In other words, the mind is an 'emergent property' of the brain and has no real existence of its own. For others however, this goes too far. As Dirckx points out, the mind-body relationship is not just a scientific question but a philosophical and theological one. 'What is a person?' is a very different question than 'What is a brain?' (2019:20). Nancey Murphy is an outspoken philosophical advocate of the modifying view of 'non-reductive physicalism (NRP)' which accepts physicalism while rejecting its reductionist conclusions.[261] NRP asserts that while the brain does indeed generate the mind, 'when the components of the brain combine to reach a certain level of complexity, they give rise to something new and distinct: the mind' (Dyrckx, 2019:24). The mind is not merely a function of the brain and cannot be reduced to its originating components. Much debate centres around whether the distinct entity of mind has causal effect (i.e. downward causation) on the brain, as the brain clearly has on the mind. So the mind is *more* than the brain, yet remains inseparably bound to it. As relates to the human person, Murphy prefers, rather than 'body and soul', the holistic term 'spirited bodies'[262] and claims, 'all of the personal characteristics as we know them in this life are supported by bodily characteristics and capacities' (2002:215).

While NRP has become a tremendously attractive idea within the science-theology dialogue,[263] it is not without critics.[264] One important theological criticism is the

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[259] Christian responses to these developments can be seen in Brown, Murphy and Molony eds. (1998), Crisp et.al. eds. (2016), Dirckx (2019), Green ed. (2004), Green and Palmer eds. (2005), Gregersen et.al. eds. (2000), Jeeves (2001, 2004), Jeeves and Brown (2009), Judge (2010), Murphy (2006a), Peterson (2003), Russell et.al. eds. (1999), Siemens (2005).

[260] Jeeves notes that 'Every neuroscience advance [brings] further confirmation of the inseparable bond between brain and mind' (2001:71). Murphy (2006:3) remarks that nearly all neuroscientists and most biologists are physicalists, while chemists and physicists vary; secular philosophers are virtually all physicists, while Christian philosophers and theologians remain divided between physicalism and dualism.

[261] See e.g. Murphy (1998a, 2002, 2005, 2006a).

[262] In a parallel way, Polkinghorne frequently speaks of 'animated bodies' (e.g. 2005a:46).

[263] Advocates include Warren Brown, Malcolm Jeeves, Joel Green. Refer to Brown et al. eds. (1998).

[264] See e.g. Fraser Watts (2000b:48-49) who suggests it is 'internally incoherent' to be a physicalist without being reductionist. Polkinghorne is cautious about premature conclusions from the still-developing field of neuroscience. Despite the 'very important discoveries about the neural pathway… there is an immense gap

eschatological concern: the NRP position either precludes the possibility of an intermediate state or fails to adequately explain the nature of continuity without the physical body. While the majority of theologians have departed from classical dualism, many see physicalism, even NRP, as too radical a step. NT scholar and NRP advocate Joel Green observes, 'biblical faith would naturally resist any suggestion… that our humanity can be reduced to our physicality' (1999:62). While NRP is a step back from extreme monism and reductive physicalism, more nuanced forms of dualism are a step forward toward a stronger depiction of the inter-relationship of body and soul. From 'anthropological dualism' and 'substance dualism' have come variations along a spectrum including 'emergent dualism' and 'mind-body event dualism',[265] while variations of NRP include 'emergent monism', 'multi-dimensional monism', the 'constitution view', and 'dual-aspect monism'.[266] At this point any further attempt to differentiate these is unnecessary and risks plunging down the proverbial rabbit hole.

Jeeves helpfully identifies 'dualism' and 'physicalism' as the two 'poles' which have framed the debate from the beginning.[267] Consensus is not yet on the horizon, but discrete positions along this complex spectrum are more comprehensible. Science-theology dialogue has largely stepped away from the incompatible extremes and nearer the middle. Polkinghorne's view fits comfortably alongside NRP although his concerns are more theologically and eschatologically attuned than the philosophical questions of mind-brain causality. Moltmann's holistic understanding of personhood likewise aligns closely with nuanced forms of monism, although his concern for *relational* wholeness is rarely addressed in the dialogue.[268] Wright too holds a strongly holistic view based on historical Jewish and biblical understanding. The weakness of most descriptions on this

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yawning between this kind of talk and the simplest mental experiences, such as feeling thirsty or seeing red, a gap which no one today knows how to bridge successfully. The problem of qualia (feels) is a hard problem indeed' (2011:67). Green notes the abstract individualism of the broader debate which neglects the biblical emphasis on community and communion with God. (1999:63).

[265] For examples: 'anthropological dualism' (Moreland and Rae 2000; Cooper 2016); 'substance dualism' (Goetz); 'emergent dualism' (Hasker 2004, 2005); 'mind-body event dualism' (Swinburne 2013); 'holistic dualism' (Thomas Gundry in Cooper 2016:263).

[266] For examples: 'emergent monism' (Peacocke 2007; Clayton 1999); 'multi-dimensional monism' (Kärkkäinen 2016); the 'constitution view' (Corcoran 2005); and 'dual-aspect monism' (Polkinghorne, cf. Judge 2010).

[267] Dualism: 'Humans are physical beings who also have nonmaterial souls. It is through our souls that we experience and relate to God'; Physicalism: 'Humans are neurobiological beings whose mind (also soul, religious experience, etc.) can, in theory, be exhaustively explained by neurochemistry and ultimately by physics'. (Jeeves, 2001:70).

[268] Joel Green is an exception (1999:62-3). He finds growing support in 'a pointed affirmation of the essentially social character of the human person… [and] capacity for personal relatedness' (1998:149).

end of spectrum is a failure to address the intermediate state or delineate any continuity of personhood beyond death;[269] Polkinghorne, Moltmann and Wright are not complicit in this failure but have attempted to portray a continuity of holistic personhood maintained into the intermediate state.

The Intermediate State

The intermediate state fulfils a primary role in expressing biblically and theologically the continuity of human post-mortem existence. Delineating and assessing its nature and the exegetical grounds for its place in Christian tradition as a picture of what transpires after death is therefore a critical aspect of individual eschatology. As discussed in chapter 3, the pervasive association of life after death with 'heaven' is misleading; one might more accurately call it the 'temporary heaven', but even that lends confusion. Although 'intermediate state' is not a biblical term it provides necessary clarity. A secondary issue is determining how closely Polkinghorne, Moltmann and Wright's depictions of post-mortem continuity conform to the biblical evidence of an intermediate state. If there is a genuine biblical basis for a real, conscious, intermediate state, the case for an overarching continuity from creation to new creation is significantly strengthened.

The intermediate state refers to the time or condition between physical death and resurrection; further description brings increasing murkiness and disagreement. Erickson introduces it this way:

> The doctrine of the intermediate state is an issue which is both very significant and yet also problematic. It therefore is doubly important that we examine carefully this somewhat strange doctrine. (1985:1175)

Both Wright and Moltmann note how significantly their thinking was intensified by having to respond to congregants facing the death of a loved one and wanting to know 'where are they *now*?'[270] Simply pointing to the final state of resurrection does not alleviate the immediate concern, nor does it give those grieving the ability to formulate a picture in their mind locating their loved ones some*where* and within the *now* of the present – the normal, even necessary, human response to death. Polkinghorne's statement that the pattern of the person is 'dissolved' at death but 'held in the divine memory'

[269] Jeeves addresses this as a major issue raised by dualists like John Cooper and goes on to explain why most physicalists have dismissed the so-called intermediate state as an unnecessary biblical postulate (2004:182-4). Again, Green as a biblical scholar is an exception (1998:167ff).
[270] Cf. Moltmann, (2004:109; 2000b:246ff.), Wright (2000b:31), Polkinghorne, (2002a:109-110).

(2002a:107) is particularly unhelpful in such pastoral circumstances. A more typical Christian response can be seen in Grudem's description:

> Once a believer has died, though his or her physical body remains on the earth and is buried, at the moment of death the soul (or spirit) of that believer goes immediately into the presence of God with rejoicing. (Grudem, 1994:816).

But what does this mean? Is this depicting an ultimate dualistic spiritual state, or a temporary situation? What does one do 'in God's presence'? What about the unbeliever? The intermediate state requires a more carefully articulated biblical and hermeneutical explanation.

Likewise, we find little help in historical tradition or doctrinal formulation. The general disarray which dominated the development of the doctrine of heaven subsumed the intermediate state until distinctions were lost, jumbled, or simply 'disappeared' in the Reformation:

> The Reformers, one and all, rejected the doctrine of purgatory, and also the whole idea of a *real* intermediate state [authors italics], which carried with it the idea of an intermediate place. They held that those who died in the Lord at once entered the bliss of heaven… (Berkhof, 1974:681).

The problem for the early church was reconciling individual judgement (at death) with the general and final judgement (at the resurrection) which led to some assuming 'a distinct intermediate state between death and the resurrection' (Berkhof, 1974:680), and others asserting the idea of a direct entry into the bliss of heaven.[271]

The Old Testament Perspective

Wright notes two important considerations around which to frame a biblical view of an intermediate state: first, prior to the late intertestamental period, resurrection was not a particularly important concept in Hebrew thought, nor in Scripture.[272] If resurrection is not in view, there is no *intermediate* state, merely speculation as to what happens after death. Secondly, the Hebrew picture of the afterlife was a gradual development which took on new dimensions in the context of Israel's socio-political history. OT scholars normally compress these developments into three discrete positions: 'absence of hope

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[271] Berkhof includes among the former: Gregory of Nazianzus, Eusebius, and Gregory the Great. But the idea of intermediate state in the Alexandrian School developed into a purification of the soul, paving the way for a doctrine of purgatory.

[272] Wright notes that resurrection arose purely as a Jewish (not pagan) construct. 'It is all the more surprising, then, to discover that, within the Bible itself, the hope of resurrection makes rare appearances, so rare that some have considered them marginal' (2003:85).

beyond death; hope for blissful life after death; hope for new bodily life *after* 'life after death''(Wright, 2003:86).[273] Wright accepts this analysis yet perceives a stronger developmental connection between the first and third. 'For both, the substance of hope lies within creation, not beyond it' (2003:86). If hope was to be found, it was not in an after-death experience, but in YHWH's renewal of the whole created order. While Christianity clearly adopted the third position, the question of 'life after death' remained.

The glaring difference between the OT and NT view of the afterlife is the OT's overwhelming silence regarding heavenly rewards, being with God, or future bliss of any sort. Johnston notes, 'Yahweh has nothing to do with the dead or the world of the dead… Yahwistic faith does not dwell on the underworld at length or with great elaboration' (2002:72-3). In contrast with the surrounding worldviews, ancient Israel had little interest in a life after death (Wright, 2003:87). The earliest concept of an afterlife began with *šᵉʾôl* (*sheol*), the vague and shadowy underworld and realm of the dead.[274] OT passages that refer to this realm of the dead testify to a sense of gloom, despair, lack of enjoyment, and withdrawal of YHWH's presence (Wright, 2003:88-89). The imagery of *sheol* is downward, below the earth, and cosmologically opposite of God's heaven (Johnston, 2002:72). Terminology around *sheol* is mixed with that of 'grave', 'pit', 'Abaddon' (a place of utter ruin or devastation), 'the deep regions'.[275] 'It is a wilderness: a place of dust to which creatures of dust have returned' (Wright, 2003:89).

Its inhabitants are not the living but referred to as 'the dead', 'shades' (or *rephaim*), and often portrayed as 'asleep'. Wright expands:

> There is no sense that they are enjoying themselves; it is a dark and gloomy world. Nothing much happens there. It is not another form of real life, an alternative world where things continue as normal. (2003:89)

Sheol is a place for *all* the dead, righteous and unrighteous alike. It would be wholly inaccurate to represent it as 'hell' (Motyer 1996:19) and does not depict a place of

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[273] Wright summarises: 'In the early period… Sheol swallowed up the dead, kept them in gloomy darkness, and never let them out again. At some point…pious Israelites came to regard the love and power of YHWH as so strong that the relationship they enjoyed with him in the present could not be broken even by death. Then, again at an uncertain point, a quite new idea came forth: the dead would be raised' (2003:86).
[274] Johnston claims this meaning of 'Sheol' as 'realm of the dead' is almost universally accepted (2002:73). Hart describes it as 'a sort of abyss in which impalpable shadows of ourselves linger on amid the dust and darkness' (2008:479).
[275] The term *šᵉʾôl* appears 66 times in the OT. The NIV translates it 55 times as 'grave', the remainder as 'death', 'depths', 'depths of the grave' and 'realm of death' (Goodrick & Kohlenberger, 1990). But this was not always negative: (Gen 3:19; Job 3:13-19, 26:5-6; Ps 16:10, 30:9, 88:3-7; Ecc 9:5ff; Isa 38:10ff).

punishment (Johnston).[276] Rather, as Job 3:13-19 indicates, 'There the wicked cease from turmoil, and the weary are at rest... the small and the great are there and the slave is freed from his master.' Yet it was a place of alienation and forgetfulness (Ps 88:11-12); its dominant aspect was the separation from God's presence.[277] Wright highlights Ps 6:5: 'In death there is no remembrance of you; in *sheol* who can give you praise? (NRSV).' For this reason it was a fitting place for the wicked, but one the righteous dread (Johnston, 2002:75). Bowker adds that, 'the plea of the Psalms is, not for an entrance into some paradise, but that the entrance into *sheol* may be postponed for as long as possible' (1993:50).

Perhaps the most vivid description of *sheol* is to be found in Isa 14:9-11 where the mighty king discovers the reality of *sheol* as completely opposite to his experience of life:

> *The grave below is all astir to meet you at your coming;*
> *it rouses the spirits of the departed to greet you –*
> *all those who were leaders in the world;*
> *it makes them rise from their thrones –*
> *all those who were kings over the nations.*
> *They will all respond, they will say to you,*
> *"You also have become weak, as we are;*
> *you have become like us."*
> *All your pomp has been brought down to the grave,*
> *along with the noise of your harps;*
> *maggots are spread out beneath you and worms cover you.*

Several points are of interest in this description. There is a sense that the inhabitants are generally 'asleep'; their spirits must be 'roused'. But there is also activity: recognition, mockery, communication. Thirdly, there is a definite continuity of identity, yet an awareness that that identity no longer consists of anything valued in the former life. There is a sense of despair and misery, but certainly not one of 'conscious torment' as in later Christian depictions of eternal punishment.

Despite this picture of misery, Wright points out that 'it would be wrong to give the impression that the early Israelites were particularly gloomy about all this' (2003:90).

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[276] Johnston regards as 'inappropriate' the AV or KJV translation of *sheol* as 'hell', adding 'the Hebrew Bible never indicates any form of punishment after death (2002:73).' Some disagree with this blanket statement. See analysis in Fudge (1994:43ff). The OT portrays it as the deserved fate for the wicked who forget God and will thence be forgotten (Ps 9:17, 31:17, 88:5), to experience alienation, shame, loss of what one had in life. Some idea of divine justice may be in view (e.g. the mighty king of Isa 14:9-11 brought down). Nevertheless, this is in stark contrast to the final punishment of *geena* / hell.

[277] Separation was the condition of death, but did not imply that *sheol* was beyond Yahweh's reach (Ps 139:8).

Lacking any more hopeful option, they seemed generally resigned to such a fate, casting it in terms of 'sleeping with one's ancestors'. This phrase was a formulaic way of referring to death, but more significantly the idea of being 'gathered into the community of one's forbears' was perhaps the most positive way of approaching the inevitable destiny of *sheol.* Wright asserts that the term 'sleep' best approximates the 'normal condition' of *sheol*. 'They were not completely non-existent, but to all intents and purposes they were, so to speak, next to nothing' (2003:90). The arousal and brief flurry of activity in Isa 14:9-11 seems to be the exception to the rule. Yet even in the OT there were tiny glimmers of hope.[278] Ps 49:15: 'But God will redeem my life from the grave [*sheol*]; he will surely take me to himself.'

The New Testament Perspective - Jesus

By the time of the New Testament, Jewish views on life after death had diversified. Resurrection had become a prominent idea in Judaism, although it remained one strand of thought amongst others. Sadducees denied it (Mt 22:23), but intriguingly the Pharisees, in addition to belief in a future resurrection (and in relation to the second of the three positions established previously), *also* held out hope that 'the dead may be 'received' by YHWH into some continuing life' (Wright, 2003:124), as Ps 49:15 and 16:10 seem to indicate, and quite possibly Dan 12:2-3.[279] This was a rather undefined hope for redemption from the separation of *sheol* and restored relationship with God, *different* from and *prior to* resurrection, which Wright interprets as the Pharisees' expression of the intermediate state (2003:133).[280] The significance of this idea is reflected in its development from a singular gloomy 'realm of the dead' to a differentiation between the destinations of the righteous and the wicked (e.g. Jesus' story in Lk 16:19ff). The key words or phrases used by Jesus in relation to the intermediate state were examined in chapter 3: *Abraham's side* (Lk 16:19-31); *In my Father's house are many rooms* (Jn 14:2); and *paradise* (Lk 23:43). Pauline phrases include: *away from the body and at*

[278] Cf. (Ps 9:18). Additionally, there are a number of oblique references to a future resurrection in the OT. These will be looked at separately in relation to resurrection. See Wright (2003:85).
[279] Cf. Johnston (2002:203) on Ps 49:15 and Wright (2003:13) on Dan 12:2-3 ('Multitudes who sleep in the dust of the earth will awake…').
[280] Wright offers a rather complex explanation (2003:123-4) of this belief, underpinned by a careful exegesis of Act 23:7-9 (2003:131ff). A passage from Wisdom 3:1-8 provides evidence of a 1st century Jewish belief in the intermediate state: 'The souls of the righteous are in the hand of God, and there shall no torment touch them; in the sight of the foolish they seemed to have died, but they are at peace' (Wis 3:1-3) in Wright (2000b:45).

home with the Lord (2Cor 5:1-10); *to depart and be with Christ* (Php 1:23). Finally, *hades* (Rev 1:18, 6:8, 20:13-14).

In Jesus' story of the rich man and Lazarus (Lk 16:19ff), there is a strong indication that this view of differentiation was already well-known. In relation to the previous understanding of *sheol*, the story would have highlighted the rich man's *separation* (the chasm) – not only from God but from communion with his own people (Abraham's side), and from his still living brethren – in comparison to Lazarus' comfort and communion (being 'gathered to his fathers'); modern-day readers often neglect this, being riveted to the problem of 'agony in the fire' and misplaced debates on hell.[281] The second phrase is given in the context of Jesus' words of comfort to his disciples on the evening before his crucifixion. 'In my Father's house are many rooms; if it were not so, I would have told you. I am going there to prepare a place for you.' (Jn 14:2). The contrast between these two pictures is striking to say the least. Can they both possibly be speaking of the same intermediate state?

The hermeneutical controversy surrounding the term 'rooms' or *monê* was examined in chapter 3. Wright sees 'my Father's house' as a clear reference to the Temple. Jewish cosmology understood the temple symbolically as God's dwelling place and the meeting place of earth and heaven. 'Jesus is using the image of the many apartments in the large Temple complex as a picture of the many 'rooms' which will be provided in the heavenly world.' (2003:446). This unifies the two phrases ('my Father's house' and 'many rooms') around a single metaphor – the Temple – and encapsulates the notion of 'the believer making his or her abode in or with Jesus' (Wright, 2003:446) who has himself become the true temple of God (Jn 2:19-21). Most importantly, he stresses that *monê* were *temporary* resting-places (as were those in the Jerusalem temple) for pilgrims on a journey. The dramatic shift from the *hades* scene of the previous depiction to one of peacefully dwelling in or with Christ may well represent the dramatic shift in the nature of the intermediate state prior to – and then following – Christ's death and resurrection. If both do indeed indicate the intermediate state, the picture and location have changed. An oft-neglected feature is Jesus needing to go and 'prepare' these rooms, as though for

[281] Numerous exegetes have argued over whether this is a 'real' description of the afterlife or a parable. Regardless of the answer, Jesus is typically using hyperbolic language to make a very real statement about the condition of separation faced by both the unrighteous and the righteous in *hades*. What should be clear is this is *not* a depiction of heaven and hell, but of the intermediate state.

the first time. No such preparation was needed for *sheol*, so the question now must be, what is the connection between these starkly contrasting pictures – and what of the additional imagery of 'paradise'?

Turning to Pauline literature, in a serious case of mixing metaphors (tents, clothing, house, dwelling, body - 2Cor 5:1-10),[282] Paul wrestles with how to explain the post-death human condition of those who die 'in Christ' differently from the OT picture of *sheol* yet also differently from resurrected life. He scrupulously avoids referring to life in the 'resurrection' (so central to his eschatology), yet attempts to portray a condition which is more desirable even than remaining in the body, concluding, 'We are confident, I say, and would prefer to be away from the body and at home with the Lord' (2Cor 5:8).[283] 'At home with the Lord' sounds strikingly similar to Jesus' phrase 'dwelling in my Father's house'. Again (in Php 1:21-3) Paul is confident: 'For to me, to live is Christ, and to die is gain.' He knows that remaining in the body means continuing in fruitful labour, yet 'I desire to depart and be with Christ, which is better by far'. This longing provides no descriptive detail about what being 'at home with the Lord' might look like, but clearly indicates a continued life not in *sheol* or *hades*, but where Christ is. Further depiction of location remains ambiguous. Neither Paul nor Christ call this 'heaven', but use other terms, even though Christ's own post-ascension location is clearly heavenly (Act 1:11).

A Potential Resolution

I propose here a resolution which incorporates all three pictures of the intermediate state together with a chronology centred around Christ's death, descent, and ascension. Beginning with the OT picture of *sheol*, we accept this 'realm of the dead' as the post-mortem destiny of all human beings. Jesus' parable of the rich man and Lazarus in *hades* maintains similar elements, but the chasm of separation recognises the anticipation that in Israel's God there is yet a hope for redemption and a future for God's people. Salvation had come into the world in Christ and eternal life made attainable for those who believed. Jesus' statement that 'the God of Abraham, Isaac and Jacob is not the God of the dead but of the living' (Mt 22:32) describes a dramatically changing situation. The dead in *sheol* would become 'alive' in Christ, and the God of the living would, through Christ's death,

[282] For an in-depth exegesis of this passage, Lincoln (1981:60-71).
[283] Paul uses *sōma* (body) in a variety of ways. Although Weder asserts that 'In Pauline anthropology *body* does not mean the material part of a human being, but rather the whole person (consisting of body, soul, and spirit)' (2000a:194), here he is clearly referring to the physical body.

conquer the power of death and free the captives of *sheol-hades* in anticipation of renewed life. That life was to be found in and with the person of Jesus Christ, as Paul so confidently proclaimed.

By referring to 'paradise', Jesus intentionally used a term metaphorically tied to the 'garden', in which the tree of life was found, both past (in the Eden narrative), and future (in the Garden of God in the New Jerusalem); but Jesus *is* the life of which the tree of life is a symbol. So in that present 'today' (Lk 23:43) with Jesus' descent to *hades*,[284] eternal life would come to the realm of the dead; the glimmer of hope and anticipation of life would become the reality of paradise. By his resurrection he conquered death and holds the keys to death and *hades* (Rev 1:18); by his ascension, he prepared the way for all those who had put their trust in God yet been imprisoned by death, to be released from the realm of death in *hades* and taken to dwell in-and-with Christ while awaiting resurrection and the new creation. Thus Paul, speaking to believers, no longer shuns death (as in the OT), but looks forward to physical death; the death of separation has no power over the believer already endowed with eternal life in Christ, but death brings them directly into the presence of Christ. At the final judgement (Rev 20:13) death and *hades* are thrown into the lake of fire – thus bringing to an end the intermediate state.

A likely criticism of this resolution is its reference to the concept of Christ's 'descent to hades'.[285] The idea has a long theological history, captured in the Apostle's creed as 'He descended to the dead'.[286] Bloesch claims 'Christ's descent into Hades was almost universally affirmed by the church fathers' (2001:339). However its biblical foundation is more tenuous, relying on a few rather obscure passages (Davies, 2008:78).[287] That his death was real and experienced is not in doubt, but rather what exactly transpired during the time he was 'among the dead' between his death and resurrection, is highly

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[284] Jesus' descent to *hades* is a well-known though controversial idea in Christian theology. Bloesch (2001).
[285] Christ's descent to the dead has been held upheld to various extents in theological tradition. Moltmann notes especially the 4th C. *Credo Aquileiensis,* which he translates (excerpted): 'the people of the saints, held captive by death, cried out with tears: Thou hast come, O desired One, for whom we have waited in darkness so that this night thou might lead us captives out of the dungeon… Thou hast been the hope of the despairing, the mighty consolation in our torments.' (in 2010:147). See also Pache (1962:63-4).
[286] McGrath (1991); Bloesch (2001).
[287] See esp. (1Pet 3:19, 4:6). Bloesch suggests the opposite, that it 'has a solid foundation in both Scripture and the early church' (2001:339). The Scriptures offered (Act 2:31; Eph 4:9-10) suggest that Jesus did indeed descend to the dead, but give no further indication of his activity there. Only 1Pet 3:19 gives a hint of 'preaching to the spirits in prison'. Bloesch also connects this to the equally obscure snapshot of many OT saints coming out of their tombs (Mt 27:52-3). Equally ambiguous is Jn 5:25 ('the dead who hear… will live).

speculative. Assuming the righteous dead were indeed redeemed from *sheol,* their new 'location' was also unclear. Bloesch explains:

> The good are seen to be in a higher compartment of Hades called Paradise (cf. Luke 16:19-31). In the intertestamental and the NT periods there was disagreement among the rabbis as to whether Paradise was to be included in Hades or was indeed a separate realm altogether. (2001:338).

The Luke 16 narrative makes no reference to paradise (and Jesus had not yet descended). All other indicators point to the redeemed being 'with Christ', so while the Bible offers no 'location', one might speculate with reasonable certainty that 'paradise' is not (or at least no longer) a reference to the righteous in *hades*, but to those with Christ, presumably in the heavenly realm and awaiting resurrection. *Hades* remains the place of the unredeemed, awaiting final judgement.

Moltmann and Polkinghorne

At this point it should be clear that the strong consensus from Wright, Moltmann and Polkinghorne on the existence of an intermediate state diverges into starkly contradictory depictions of its nature and character. While Wright's more biblically aligned view includes a distinct division between those who come to dwell with Christ (either redeemed from *sheol* or who die 'in Christ') and those who remain in *sheol*, Moltmann and Polkinghorne present a unitary picture of life after death, and neither deal in depth with the biblical passages above. Yet all three hold strongly to a view of continuity of the whole person, not a disembodied 'soul'. Is there any synthesis to be found?

Polkinghorne's concern is in expressing *how* continuity of the person can be expressed in a scientifically coherent way, through the concept of 'dual-aspect monism' and an 'information-bearing pattern'. 'The pattern that is the soul [i.e. person] is not simply contained within the confines of our skin' (2000a:39). In essence, the pattern *is* the whole person. However, Polkinghorne's depiction of this intermediate state is deeply unsatisfactory: 'It would seem a coherent hope that this vastly complex pattern that is a human person could, at death, be held in the divine mind to await its reembodiment within the life of the world to come' (2000a:39.) Being 'held in the divine mind' provides no clear context for participatory communion in Christ (nor for a 'sub-human' existence in *sheol*). In part through Moltmann's influence, Polkinghorne has adopted a greater concern for the relational aspect of human personhood. 'The pattern that is me must include those human relationships that do so much to make me what I am, and also

it must express the nature of my unique creaturely relationship with God' (2000a:39). Yet Polkinghorne does not speculate on how that might be realised within his conceptual framework.[288]

In complete contrast, Moltmann offers very little explanation for the *how* of continuity, but extensive speculation on the nature and character of the intermediate state. For Moltmann the life of the intermediate state is full and active, reconciling, healing, restoring all that was left undone in life. It is the future completion of the 'spoiled and curtailed life' (2000b:251). Every life on earth is incomplete, traumatised by conflict, spoiled by broken relationships. The intermediate state is the vital and necessary corrective to all the injustices of life.[289] Such total reconciliation must involve victim and perpetrator, oppressed and oppressor alike.

> God's judgment means the final putting to rights of the injustice that has been done and suffered, and the final raising up of those who are bowed down. So I conceive of that "intermediate state" as a wide space for living, in which the life that was spoiled and cut short here can develop freely. I imagine it as the time of a new life, in which God's history with a human being can come to its flowering and consummation. (Moltmann, 2000b:252).

Moltmann highlights three aspects of this intermediate 'life for the dead': time, space, and community (1996:104ff). Time is required for healing and restoration of relationships; space is needed for living; community (which involves the joined community of the living and the dead in 'the fellowship of Christ' – Rom 14:9) binds all together in love and a common hope. Resurrection awaits. Moltmann's view of resurrected life in the new creation is one of *completed* healing, reconciliation, and restoration. The process of achieving this takes place in the intermediate state.

Moltmann does not reach this position through biblical formulation, but through development of a theocentric and universally oriented salvation, framed in terms of a 'universal glorification of God' (2010:148). For Moltmann there can be no distinction between *sheol* and a community of the redeemed 'in Christ' because God must be all in all. 'God goes into hell, hell extends to him: that is the meaning of Christ's descent into

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[288] Green points to both Polkinghorne and Warren Brown as advocates of recasting the notion of 'soul' in relational terms, (2002:38-9), but Polkinghorne has yet to translate this into a more cogent explanation.
[289] For this reason Moltmann rejects the doctrine of 'soul sleep' (or psychopannychism) (1996:101-2); cf. Erickson (1985:1176-7), Milne (2002:169-70) and 1Cor 15:18. Although 'sleep' may be a typical condition of the intermediate state in Wright's view, 'soul sleep' dismisses all activity in an intermediate state, suggesting no conscious awareness and a universal and simultaneous awakening at resurrection.

hell' (1968b:119).[290] 'Hell is open; one can go through it freely' (1968b:118). Moltmann thus diverges significantly from the biblical depiction of the intermediate state, yet his emphasis on relationship, community, reconciliation, and 'time and space for living' is biblically cogent and profoundly valuable as a counterbalance to the numerous interpretations emphasising mere continuity of existence – including Polkinghorne's. As Moltmann rightly maintains, true human life cannot be defined as individual existence, but must be lived, and lived in the broader context of community, freedom, fellowship and love.[291] In the absence of these elements, human life is deficient, fragmentary, alienated, and unfulfilled – in a word, sub-human – the very context of *sheol.*

Only Wright maintains the division in the intermediate state between the dead in *sheol* or *hades* and those who experience life 'in Christ'. Unlike Moltmann however, Wright does not speculate further regarding the nature of life in this latter group, preferring not to elaborate beyond the silence of biblical description. For Wright, 'all the Christian departed are in substantially the same state, that of restful happiness' but 'held firmly within the conscious love of God and the conscious presence of Jesus Christ (2008:171-172). While Wright's view most closely corresponds to the limited biblical picture, Polkinghorne's adds a vital scientific plausibility, and Moltmann's, while speculative, corresponds theologically to Jesus' own concept of 'life'. 'I have come that they may have life, and have it to the full' (Jn 10:10).

Conclusion

The aim of this chapter was to assess the level of continuity in individual eschatology. Polkinghorne, Moltmann and Wright are all strongly aligned toward a holistic view of the person, though for different reasons. Wright, because he sees this as the dominant understanding of the biblical authors which emerged from the Hebrew worldview; Moltmann because of the impossibility of separating the relational quality of one's whole 'lived life' from personal identity; and Polkinghorne on the basis that the human person as a psychosomatic unity is the best explanation of both the evolutionary and non-

[290] In older writings, Moltmann refers to this in the typical manner of his time as 'descent into hell' (1968b). We have already discussed the mistranslation of *hades* into hell. While Moltmann uses 'hell' it is clear he is depicting the 'realm of the dead', not a final state. Moltmann uses the term 'hell' in a variety of ways.
[291] Moltmann is not alone in valuing the relational dimension of personhood. Cf. Weder (2000a:194-5).

material accounts of human experience.[292] This holistic view (which concurs with the current tenor of science-theology dialogue) creates the pronounced difficulty of articulating an experienced intermediate state prior to resurrection. All three assert that such a state is necessary, and that some 'form' of embodiment continues after death; only Polkinghorne attempts to define this in a scientifically recognisable way.

Both Moltmann and Polkinghorne rely on the concept of 'pattern' to express the continuity of the person. Moltmann speaks of the person as 'the perichoretic pattern of body and soul' (1985:258) and Polkinghorne as 'the almost infinitely complex information-bearing pattern in which the matter of the body is at any one moment organised' (2005a:47). Wright adheres to a biblical view of continuity consistent with OT assertions of non-differentiated personhood beyond death, despite the challenge of articulating that personhood in *sheol* or with Christ. There is strong consensus on the necessity, continuity, and reality of the intermediate state, but significant contrast in its depiction.

Moltmann views the intermediate state not as diminishment but as fulfilment, involving an essential corporate dimension as the means of completing and restoring the deficiencies of prior life. Polkinghorne's description of 'held in the mind of God' is descriptively weak, but intentionally open to development. Only Wright asserts a differentiation between those remaining in *sheol* and those who through salvation dwell with Christ. All see continuity in personhood, identity and existence, and all agree the intermediate state is an essential aspect of progression toward future embodied resurrection as the ultimate teleological goal of human life. Despite their differences, individual eschatology is uniformly recognised as a two-stage process (e.g. Wright, 2003:178-80), where the intermediate state provides the vital link of continuity between present life and resurrected life in the new heaven and new earth.

[292] Human experience includes the relational: 'The 'pattern that is me' cannot adequately be expressed without its having a collective dimension' (Polkinghorne, 2002a:109).

Chapter 6
Issues of Continuity in Scientific Cosmology and Eschatology

'The Universe is destined to die'
John Polkinghorne[293]

Introduction

Eschatology in its fullest sense is cosmic in scope. Cosmic eschatology provides the *context* for individual and corporate eschatology. It refers to the future 'big picture' narrative – whether the scientific cosmology of the physical universe from 'big bang' to heat death, or the biblical cosmology of 'heaven and earth' from creation to new creation. Clearly then, 'cosmology' maintains two very distinct meanings, one based on the nature and structure of the physical universe (scientific cosmology), the other on the relational purpose and meaning of 'heaven and earth' (biblical cosmology).[294] Both of these must be viewed with equal seriousness if there is any hope for consonance through science-theology dialogue. The question of continuity and discontinuity is most significant in cosmic eschatology, since the value of a strong individual continuity shown in the previous chapter – even through death and the intermediate state – is greatly diminished if the context in which it takes place is one of discontinuity. Conversely, if the context is one of cosmological continuity, then this becomes the dominant framework for Christian theology, with significant implications for life in the present.

The scientific perspective is critical in this endeavour. It portrays a universe changing significantly in character and complexity over billions of years of fundamental continuity – yet ultimately ending in futility and death. In stark contrast, the biblical picture (see chapter 7) is one of future hope, of 'eternal life' in a new heaven and new earth – though theologically that hope is interpreted in radically different ways. Theological speculation regarding time, space, eternity, and divine transformation – frequently unrestrained by critical realism or ignoring scientific certainties altogether – is often a major obstacle in seeking a mutually plausible account of eschatology. Wilkinson notes that few theologians have attempted to address the question of the end of the universe or to

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[293] Polkinghorne (2009:172).
[294] These are the topics of chapters 6 and 7 respectively. Until the modern age cosmology referred to a culture's 'shared view of how human life, the natural world, and God or the gods fit together' (Primack & Abrams, 2006:16). Modern scientific cosmology makes no attempt to relate to human affairs, but is considered as 'the branch of astrophysics that studies the origin and nature of the universe as a whole by developing theories and testing them against observational evidence' (Primack & Abrams, 2006:16).

provide ‘a combined account of creation and eschatology’ (2010:27). Yet creation-focused theologies, emphasising both the redemption of the present creation and the physicality of the new, bring vital insights which encourage a more productive engagement with the scientific account. As Wilkinson points out, ‘It is that theological insight that should motivate us to take the end of the physical Universe seriously’ (2010:27).

This chapter and the next attempt to do just that – take seriously the eschatological contentions of both scientific and biblical cosmologies to determine the most plausible and consonant explanation, and to assess whether this involves primarily continuity, discontinuity or aspects of both. This chapter provides a theological assessment of scientific cosmology and the future ‘end’ of the universe; the next provides an assessment of biblical cosmology (and its own ‘end of the world’ scenarios), with a potentially different eschatological outcome. The question is whether a science-theology dialogue can ultimately find resolution or consonance between these perspectives. In attempting a correlation, consensus on the nature of time and the relationship between God, time, and eternity is particularly critical (and equally important in resolving issues between cosmic and individual eschatology), and will therefore be assessed in this chapter. The results of this overall assessment will determine whether the biblical ‘new heaven and new earth’ is conceivable in relation to a scientific cosmological framework, and how that relationship might be construed.

The Nature of the Physical Universe

‘In the beginning was the big bang.’ So opens the story of the universe from the perspective of scientific cosmology (Polkinghorne, 1994a:71). Despite some lingering controversy over specific aspects, the cosmological model of an expanding universe has gained a near universal scientific consensus in the seventy years since Lemaître’s hypothesis of the ‘primeval atom’ and Fred Hoyle’s pejorative response, coining the term ‘big bang’.[295] As Polkinghorne explains, ‘the universe which came into being 13.7 billion years ago as an almost uniform expanding ball of energy is now a richly structured world with a great variety of life on at least one of its planets’ (2011:57). He frequently traces the evolutionary history of this expanding universe from the first generation of star

[295] See Holder (2013:17-18) re Lemaître and Hoyle; Coles (2001), Hawking (2001) on the cosmological model.

and galaxy formation to the nuclear production of heavier elements scattered through supernova explosions, recombined in the next generation of stars and planets, until a suitable environment for carbon-based life developed on earth.[296] 'In the course of its long evolutionary history, the universe has become structured and diversified to a very high degree' (Polkinghorne, 2002a:3).

Two important points stand out even from this very simplified depiction. First, the universe is dynamic, constantly evolving into greater diversity and complexity; second, the timescale of its development is vast, far beyond the relatively negligible timeframe of human existence. For physicists and cosmologists, this timescale is a serious concern, shifting questions of both origin and endings to a timescale of billions (or even trillions) of years. For theologians, the relational dynamic between God and human beings – and the functional creation which encompasses human life - is the only meaningful framework for cosmology, so the timescale of concern is an anthropocentric one. Polkinghorne highlights this striking difference of scale: 'If the age of the universe were taken to correspond to a single cosmic 'Year', then the time from Abraham to the present day would amount to less than the final ten seconds of the last 'Day'' (2008:33). Yet these two perspectives must both be taken into account in a critical realist framework. Ironically, these contrasting perspectives are only joined in the human mind; as many cosmologists have pointed out, it is in humanity that the universe becomes aware of itself. This in itself is an extraordinary observation relating to the enigmatic intelligibility of the universe.

The dynamic nature of the universe must also be recognised theologically. As Polkinghorne claims, 'Cosmic history is the story of unfolding fertility and the processes that have brought this about are mostly of a kind that can be characterised as evolutionary' (2011:57). Theologians who ignore this assessment risk promoting an overly simplified view of a static or stable creation appearing essentially the same now as it has from the beginning. This difference is highlighted in phrasing such as 'the act of creation' rather than 'God's continuous action in creation'. While a static view of creation has been greatly challenged in recent years, its eschatological parallel has not. The 'new heaven and new earth' is frequently depicted without change, as a final

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[296] For detailed summaries see Polkinghorne (1983:ch2; 1994a:ch4; 2002a:3-4). Cf. Brown (2010:73-4). For lengthy popularised accounts, Adams (2002), Christian (2004), Silk (2009), Spier (2011).

completion, for all eternity. Theological eschatology must be open to a reinterpretation in the context of a dynamic and evolutionary universe.

Organising Principles and Composition

Timescale and dynamic change are not the only important considerations. Polkinghorne describes several other characteristics with deep theological implications. Among these are the 'fruitfulness' and 'potentiality' of the universe, widely understood as the result of the interplay between contingent chance and lawful necessity, balancing regularity with novelty.[297] As Polkinghorne explains, 'The interaction between Chance and Necessity is a kind of shuffling exploration of potentiality, bringing to birth aspects of the inherent fruitfulness of the universe' (2011:58). Only a tiny fraction of possible happenings become actual occurrences stable enough to take hold. This contingent selection from the conceivable range of possibilities is the basic concept of 'chance', while 'necessity' signifies the underlying regularity and stability of laws that shape and constrain these occurrences. That these actions over 13.7 billion years should lead to the appearance of self-conscious, intelligent beings is an astonishing sequence of events, testimony to the inherent potentiality of the universe – but also begs the question of why this should be so. Such continuity challenges concepts held or assumed by many theologians regarding the nature of creation – and human beings – but must be factored into a meaningful science-theology dialogue.

The incredibly precise balance and 'fine-tuning' of the fundamental forces underpinning 'necessity' exemplifies the concept known as the 'anthropic principle'.[298] This idea recognises the multiplicity of precise conditions both in the initial formation of the universe and specific to life on earth, uniquely required to enable the emergence of intelligent life.[299] As Stephen Hawking famously claimed, 'If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand

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[297] Polkinghorne attributes the public presentation of the 'chance and necessity' argument to philosopher Jacques Monod (1971). The concept has since elicited a great deal of philosophical thought and speculation in the science-theology dialogue, e.g. Ward (1996), Davies (2007), Davis and Poe (2008), Polkinghorne (2006d:60).

[298] 'Anthropic' is a slightly misleading term, emphasising human beings, when in fact the conditions necessary for carbon-based life did not imply homo-sapiens and are only the final phase of a long string of precise conditions making possible a stable universe, a functional planet, and biological life. Polkinghorne (2011:54).

[299] Holder offers twelve significant examples of 'cosmic fine-tuning' (2013:87ff). For more detailed description of the anthropic principle in Polkinghorne: (2011:54ff; 2002a:4ff; 1998b:36ff, 73ff; 1995f:68-72). See also Davies (2007), McGrath (2009a), Ross (2008:120-4).

million million, it would have recollapsed before it reached its present size' (1988:121-2). Polkinghorne offers another example:

> Only because the balance between the fundamental forces of gravity and electromagnetism is what it is and no different, have stars been able to burn for the billions of years that are necessary if they are to be able to fuel the development of life on one of their planets. (2002a:4-5).

Many of these crucially balanced conditions came about within the inflationary era of the first fraction of a second of the birth of the universe, resulting in the fundamental forces and the formation of all the particles and matter of the universe. Within the first three minutes, the universe had transformed from 'a hot soup of quarks and gluons and leptons' (Polkinghorne 1994a:71), to a composite of hydrogen and helium in the ratio still existing today.[300]

Such matter-based descriptions of the composition of the physical universe turn out to be highly inadequate due to the counter-intuitive discovery of both 'dark matter' and 'dark energy',[301] the latter proposed in 1998 as the mysterious repulsive force explaining the unexpected accelerating rate of expansion and constituting an extraordinary portion of the density of the universe. Recent assessments show the universe composed of 73% dark energy, 23% dark matter, and only 4% atomic matter.[302] Of this ordinary 'baryonic matter', roughly 10% is visible (galaxies, stars, planets, gas clouds); the rest is 'invisible' (mainly hydrogen and helium atoms between galaxies). Thus all the visible matter in the universe comprises less than 0.5% of the whole. This understanding leads to inevitable questions of how all of these extraordinary insights might correspond at a theological level to the biblical picture of creation?

Implications of a Beginning

The idea that the universe had a beginning is virtually taken for granted today but is notably a very recent development in scientific cosmology. Extremely contentious when first proposed, resisted by many great theorists such as Einstein and Hoyle, it was only

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[300] The first three minutes are regarded by physicists as particularly crucial and rapid 'eras' in the development of the universe. See Stephen Weinberg's acclaimed work (1977); also Barrow (1994), Chown (1993), Davies (1994), Gribbin (1993), Holder (2013), Singh (2004).

[301] The Cold Dark Matter (CDM) theory explained the level of gravitational force far exceeding what could be explained by observable matter. It does not emit light, so is effectively invisible to observation. For an account of these developments, Primack and Abrams (2006:28-30); Wilkinson (2010:12-16). Dark energy is also associated with the vacuum in quantum theory. See Holder (2013:19); Polkinghorne (2011:52).

[302] Wilkinson (2010:13). Cf. Primack and Abrams (2006:114-5); Polkingorne (2011:53).

settled after decades of fierce debate. The theory was not confirmed until 1965 with the detection of cosmic microwave background radiation (CMBR), and not proven experimentally until the results of the COBE (Cosmic Background Explorer) satellite data in 1992 and the later WMAP (Wilkinson Microwave Anisotropy Probe) missions completed in 2010. While CMBR detected a uniform temperature distribution of 2.7K – the residual effect of the expansion and 'cooling' of the universe since the phenomenally hot big bang – COBE and WMAP confirmed the uniformity was not absolute, but varied throughout the universe by a mere few parts per million, just enough to make a crucial difference.[303]

> Random distribution of small fluctuations in the matter/energy of the early universe (Chance) provided the seed from which the lawful action of gravitational attraction (Necessity) would, over time, induce the condensation of galaxies and stars. (Polkinghorne, 2011:58).

COBE mapped the tiny differences of density and temperature throughout the universe emitted 380,000 years after the big bang, the point when 'the temperature dropped to about 4,000K and matter and energy decoupled as the nuclei and free electrons combined to form atoms and molecules' (Holder, 2013:52) leading to the formation of first generation stars and galaxies. The importance of these discoveries can hardly be overstated. Cosmologists referred to CMBR as 'the afterglow of creation' and COBE director George Smoot declared, 'If you're religious, it's like seeing the face of God' (Chown, 1993) – not the language one normally associates with science.

Why were these discoveries both so astonishing and yet so fiercely resisted? A universe with a beginning demanded a radical reorientation of the scientific perspective and carried with it a number of extraordinary implications. On one level, the alignment of this idea with Christian theology's doctrine of creation was not lost on either scientists or theologians – thus the religiously inspired language of some scientists, and the overzealous conjectures of some theologians, confusing creation with origination.[304] In contrast however, the 'big bang' beginning hardly resembled the beginning described in Genesis 1. But from the scientific perspective, it meant the universe was finite. It had a point of origin, not *within* space and time, but *of* space and time. To conceive of a 4-

[303] Such uniformity was a crucial 'simplifying assumption' of cosmologists whose calculations assumed that matter comprising the universe was distributed evenly (homogeneity) and that it looked the same in all directions (isotropy). Holder (2013:11), Polkinghorne (2011:48).

[304] Holder offers the example of Pope Pius XII's declaration in 1952 that the 'big bang' theory supported the doctrine of creation, much to the consternation of Lemaître (2013:41). See Polkinghorne (1988a:54).

dimensional expanding space-time universe begged the questions, 'If time and space had a beginning, do they also have an end or boundary?' More disturbingly, 'If the universe had a beginning, will it also have an ending?' An important corollary to that question is the teleological one: where is the universe heading, and what factors are driving it in a particular direction?

The answers are not straightforward. While the universe is finite, this does not entail boundedness, although the 'observable universe' is bounded by an event horizon beyond which accelerating expansion means light will never reach earth, so can never be seen. While we can speak of the age of the universe, the nature of time within the space-time continuum is disputed and controversial. Even a 'temporal beginning' remains speculative due to the imperceptible character of the big bang 'singularity'. As one peers further and further back in time, one approaches the moment when the entire mass of the universe is reduced to a single point of zero size, infinite density and temperature.[305] At this point the laws of physics break down and any evidence of origination remains elusive. The teleological question is particularly noteworthy because of the discord between the second law of thermodynamics (increasing entropy / disorder) and the increasing complexity and fruitfulness of life on earth. Cosmologists invariably recognise the *appearance* of design and purpose, but these are not scientific notions, and their interpretation varies on the basis of one's metaphysical presumptions.[306] Polkinghorne captures this dichotomy:

> A merely clockwork world would tick away until its spring ran down. A dynamic universe, whose history repeatedly contains the evolution of genuine novelty (life, consciousness, self-consciousness) going far beyond simply new arrangements of old components, might be going somewhere, even if its eventual destination lay beyond simple extrapolation of present process. (2000a:34)

Futility and the End of the Universe

In a purely scientific cosmology, all of the assertions and implications of a big bang universe lead to one inevitable and existentially demoralizing conclusion. The universe is

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[305] The concept of a singularity as a point where the fundamental forces break down is well-known in physics. See Holder (2013:20, 59), Hawking (1988:46), Polkinghorne (2002a:3), Stoeger (1996); Wilkinson (2010:12).

[306] Cf. Gingerich (1998), Gonzalez and Richards (2004), Ward and Brownlee (2004). Hawking admits, 'It would be very difficult to explain why the universe should have begun in just this way, except as the act of a God who intended to create beings like us' (1988:127). Yet rather than accept this view, he prefers to challenge the notion of a temporal beginning, making God 'unnecessary'.

going to die. Polkinghorne's hint of a universe that 'might be going somewhere' is a theological hope based on something 'beyond simple extrapolation'. But the stark reality is that current cosmological extrapolation forecasts exactly where the universe is going, and the picture is grim. Cosmologists have long recognised that the implications of an 'exploding' universe comprising a cosmic tug-of-war between the forces of gravity and expansion would eventually result in either gravity's reversal of expansion – collapsing the universe back to its initial singularity in a 'big crunch' – or a ceaseless expansion and correspondent depletion of energy.[307] This realisation led physicist Steven Weinberg to famously conclude, 'The more the universe seems comprehensible, the more it also seems pointless' (1977:154).

Until very recently, there was spirited contention over which scenario was most likely, collapse or unending expansion. In the latter scenario as Wilkinson describes, 'the Universe expands forever becoming more and more a cold life-less place full of dead stars, a so-called heat death' (2010:12). 'Either way' Polkinghorne frequently claims, 'the observable universe is condemned to eventual futility' (2000a:31). Ever more innovative methods of observation led to a final startling discovery: the expansion of the universe was not slowing but actually accelerating, a phenomenon now attributed to the effects of 'dark energy'.[308] Consensus shifted to a conclusive victory of expansion over gravity. The shocking destination of cosmology's eschatological perspective is the gradual decline and ultimate death of the physical universe.

Theological Insights

This exploratory foray into scientific cosmology provides the essential background data necessary to determine what level of consonance may be found with biblical cosmology. Although we have not yet viewed the latter, there are important theological insights to be gained simply from the scientific perspective itself. As Polkinghorne claims, 'the story that the scientists have to tell is a grand and exciting one. It is a story which has to be reckoned with by anyone who seeks to take account of the way the world is' (1983:8). The tremendous advances in the scientific understanding of the origin, nature, and dynamic trajectory of the physical universe are as revealing of God's creation as is the

[307] A third option of an 'oscillating universe' with eternal cycles of expansion and contraction had some early support, but nevertheless results in the same universal demise of collapse into a singularity.
[308] For description of the experimental process leading to this conclusion: Primack and Abrams (2006:29-30), Wilkinson (2010:12-14), Holder (2013:91).

relational account of the Bible; therefore as Polkinghorne suggests, 'theological discourse on the doctrine of creation must be consonant with that account' (1994a:73).

Contrasts of Scale and Beginning

The most extraordinary insight offered by the scientific account must be the sheer scale of the universe. One cannot truly conceive of a timescale of 13.7 billion years, or the vastness of a universe which accelerated in size beyond the speed of light and is forever disappearing beyond observational boundaries. While this may seem irreconcilable with the biblical concept of 'heaven and earth' described on a far more human scale, science has shown that only a universe of such age and size could have produced human beings.[309] This demonstrates that the two accounts are not separate but interconnected. Yet contrary to the profusion of attempts to harmonize or amalgamate these as a singular account, the biblical creation story need *not* be seen as an account of the universe at all. It is rather the story of 'heaven and earth' and should not be confused with the story of the universe. There is intersection rather than overlay.

Theological attempts to harmonize evidence for an 'old earth' with Gen 1 have carried on for decades.[310] But evidence for the age of the universe combined with its evolutionary development forces a more radical reassessment. The creation of heaven and earth can no longer be interpreted as concurrent with the beginning of the universe, since earth did not exist until 9.5 billion years after the big bang. Therefore the biblical 'in the beginning' should not be interpreted as the beginning of the universe. Surprisingly perhaps, this is not a serious theological dilemma since Christians for centuries have *not* viewed the universe as having a beginning in time or space - although it does contend with a considerable stream of theological tradition associated with an *ex nihilo* creation event.[311] Polkinghorne concisely argues against that stream: 'Theology is concerned with ontological origin and not with temporal beginning. The idea of creation has no special stake in a datable start to the universe' (1996a:73). He perhaps overstates the case, as theology is no doubt interested in both. An ontological interpretation of Gen 1 certainly does not insinuate that God was not *also* responsible for the temporal beginning at the big

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[309] E.g. Polkinghorne (2006:63; 2011:56).
[310] The most common of these is known as the 'Day-Age' view, where a biblical day parallels an 'age' in the development of the universe. See e.g. Ross (1998), Davis (1998), Hagopian ed. (2001), Burge (2005),
[311] Cf. Hagopian ed. (2001), Carlson and Longman (2010), Barton and Wilkinson eds. (2009) incl. Wilkinson (2009a:135-8) for comparisons of different theological interpretations of beginning.

bang but implies that something else is in view in the narrative of 'heaven and earth'. This differentiation has become quite pronounced in the science-theology dialogue, but much less-so in mainstream theology.

Teleological Insights

A second key insight relates to the organising principles of chance, necessity and the anthropic principle. Those in the science-theology dialogue do not merely accept these phenomena without questioning their deeper metaphysical significance. Why did the universe unfold as it did, in ways *necessary* for life, but not necessary for a universe? Polkinghorne cites one example:

> No one supposes that the early universe was pregnant with the genus *homo*, but if natural necessity had not taken the form it actually does… there would have been no carbon-based life because there would have been no carbon. (2002a:5).

The anthropic principle begs an explanation beyond mere coincidence. A 'weak' anthropic principle simply recognises the state of affairs without attendant explanation, but the 'strong' anthropic principle's teleological interpretation relocates it to the metaphysical and theological realm (Polkinghorne 1998b:37), where it competes with an alternative explanation: the multiverse theory.

The multiverse theory posits a nearly infinite number of universes, such that at least one happens to support human life, thus dismissing notions of design or purpose;[312] the 'strong' anthropic principle suggests that the 'fine-tuned potentiality… is the creation of a God who purposely endowed it with just those properties what would enable it to have a fruitful history' (Polkinghorne, 2006d:64). Polkinghorne points out that both explanations are 'trans-scientific'. The latter's overtly theistic view seems contentiously non-scientific, but the multiverse is no more than a 'metaphysical guess' which 'does not offer reliable grounds for belief' (2006d;64). The 'strong' anthropic explanation provides theologically rewarding insights, yet any interpretation which closely aligns God's involvement with cosmic processes must face the challenge that these same 'organising principles' have shown enormous destructive potential as well: black holes, super-nova

[312] See Holder (2013:ch8) for detailed arguments regarding multiverse. A'participatory anthropic principle' in which 'observers bring about the grounds for their own existence', is rejected by Polkinghorne (1994a:76).

explosions, asteroid strikes, mass extinctions, predation, viruses, cancerous mutations, suffering, etc.

While the scale of the universe assigns a completely insignificant status to human life, this is strongly contradicted by the anthropic principle. Scientists who choose not to take this into account nevertheless reach metaphysical conclusions such as Hawking's:

> The human race is just a chemical scum on a moderate sized planet, orbiting around a very average star in the outer suburbs of one among the hundred billion galaxies. We are so insignificant that I can't believe the whole universe exists for our benefit. (1995) [313]

This same question of significance is reflected biblically: 'When I consider your heavens… what is man that you are mindful of him?' (Ps 8:3-4). In contrast, Primack and Abrams (2006) posit that humanity, despite its very late and very brief appearance, is extremely significant for bringing self-awareness to the universe, having arrived at precisely the right time and place in its development to make this possible.[314] Polkinghorne concludes, 'the appearance of self-conscious beings [is] the most astonishing development that we know about in all those fifteen billion years of cosmic history' (2002a:4).

Creatio Continua

For Polkinghorne these organising principles and the appearance of teleological design and purpose provide strong supporting evidence for 'continuous creation'. The absolute continuity of the scientific cosmological account provides a vital insight for a consonant theological understanding of creation. While the doctrine of *creatio continua* has a strong theological tradition in relation to concepts of immanence, preservation, and providence, until the advent of a big bang cosmology it had not been associated with the evolutionary 'process' of an unfolding creation.[315] Polkinghorne argues that while *creatio ex nihilo* is a metaphysical concept, 'belief in *creatio continua* can be more directly motivated by our perception of cosmic process, the evolving complexity of a universe endowed with anthropic potentiality' (1994a:76). This does not entail either a rejection of *ex nihilo* creation – as in the views of 'process theology' (Cobb and Griffin; Whitehead) – nor a

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[313] From a 1995 television interview with Ken Campbell, *Reality on the Rocks: Beyond our Ken,* Season 1, Episode 3.
[314] Cf. Polkinghorne's comments on significance and meaning in evolutionary processes (2011:60-61).
[315] Since then continuous creation has emerged as a central theme among many scientist-theologians. Cf. Barbour (1966:ch12), Peacocke (1979:ch2-3), Moltmann (1985), Pannenberg (2008), Franklin (2014).

merging of the traditional *ex nihilo* doctrine into an aspect of 'continuing creation' (Barbour, 1966:417),[316] both of which Polkinghorne rejects for blurring the distinction between Creator and Creation (1994a:74). But it does entail an important new differentiation between the two, and a much stronger assertion of *creatio continua* as the 'working model' for Christian theology in relation God's relationship to the world.

Mark Harris explains that '*creatio ex nihilo* is a foundational theistic statement of God's transcendence with respect to the world' (2013:115), and Polkinghorne is a strong advocate of such a view. However, the temptation to take this further and associate *ex nihilo* creation with the big bang event rests on shakier ground. The idea is attractive since both suggest a dramatic origin event at a particular moment in history, but such a close connection is controversial. Proponents Copan and Craig make a firm claim that, 'not only do the Scriptures strongly imply creation *ex nihilo,* but the empirical evidence of an absolute beginning of the universe does seem to have momentous theological ramifications' (2004:18).[317] They fault Polkinghorne for placing insufficient weight on the connection between *ex nihilo* and big bang cosmology. Yet Polkinghorne, Holder, Stoeger and other physicists reject this correspondence partly on the grounds that the big bang singularity is not in fact 'nothing'.[318] To relate *ex nihilo* to the pseudo-nothingness of 'an inflated vacuum fluctuation' (or indeed any other origination theory) is a mischaracterisation that misses the point of *creation ex nihilo*.[319]

A second concern with Copan and Craig's stance is the implication that the biblical phrase 'in the beginning' is equivalent to the 'absolute beginning' of the universe, a point which needs further elucidation alongside a biblical cosmology. Polkinghorne agrees with Copan and Craig that Scripture strongly implies creation *ex nihilo,* but resists narrowing its interpretation to a temporal act of creation. Rather, he interprets it as the Creator's transcendent work 'preserving creation from ontological collapse', or in other words, 'God's role [in] holding the universe in being through its history, whether that

[316] Cobb and Griffin's account of process theology rejects the notion *creatio ex nihilo* and affirms instead a doctrine of 'creation out of chaos' (Cobb and Griffin, 1976:65). Whitehead and Teilhard likewise assert the view of a Creator not as *before* all creation, but *with* all creation. Polkinghorne is unwilling to go this far, arguing that it diminishes God's divine power and breaks down His distinction from creation (1994a:73-4).
[317] See also Davis (2002:36), Gunton (1997:142).
[318] See Stoeger (1997:222), Drees (1993:333). Hawking's 'no boundary proposal' and the 'multi-verse theory' similarly preclude a temporal beginning (Holder, 2013:59ff).
[319] For explanation of the 'nothingness' of the quantum vacuum theory which relates to dark energy and the initial inflation of the universe, see Holder (2013:19-20), Polkinghorne (1998b:34-6).

history is finite or infinite in duration' (1994b:80-1). In this way he upholds the more historical tradition of *creatio ex nihilo*, concluding that an *ex nihilo* creation has no stake in preferring big bang over a steady state cosmology because its concern is ontological origin and not a temporal beginning.[320]

Surprisingly then, a scientific 'big bang' cosmology may not advance a stronger theological assertion of *creatio ex nihilo* but rather implies a far more robust, even reformulated, view of continuous creation.[321] *Creatio continua* in Polkinghorne's view is much more than God's immanence in, or preservation of, creation. It is 'the unfolding creative process by which potentiality is continuously being transformed into actuality' (2011:79), and this affirms an ongoing creative interaction between God and the world he upholds. Yet Polkinghorne's interpretation of *creatio continua* is not an active imposition of God's will on the universe, nor even God's creative exploration of his creation (e.g. Peacocke 1990:121). Both of these in his view assert too strong a sense of God's wilful interaction, which must be mitigated by the recognition of blind alleys, wasted efforts, extinctions and suffering. Rather, he argues for a creation free to 'make itself'.[322] The Creator must remain ontologically distinct from creation yet interact with creation through the granting of creative freedom, in which the organising principles and natural processes allow the universe to 'make itself' as an expression of God's will (1998b:80).

Polkinghorne arrives at this idea partly through Moltmann's view of divine self-limitation. In an innovative divergence from the typical distinction between Creator and creation, Moltmann questions how an infinite and omnipresent God could create anything 'outside himself'? Through an exploration of the Jewish Kabbalistic concept of *zimzum* (or *zimsum*), in which God withdraws himself *from* himself to create a space for creation to exist separately and freely from the Creator yet in intimate relationship,[323] he resolves that 'the infinite God must have made room for this finitude beforehand, 'in himself' (1981:109). In order for such a creation not to be overwhelmed by God's own being,

[320] This fundamental disagreement is the source of some dismay in the science-theology dialogue. 'There is no area…more bedevilled [sic] by theological ignorance on the part of scientists than in the discussion of the doctrine of creation' (Polkinghorne, 1998b:80).
[321] Cf. Peacocke (1979:304).
[322] Gunton asserts this theologically: 'God remains in close relations of interaction with the creation, but in such a way that he makes it free to be itself' (1997:142).
[323] This concept is a recurrent theme in Moltmann's writing (1981:108-11; 1985:86ff; 2001a:ch 8; 2001b; 2010:109-10). Polkinghorne likewise refers frequently to God's divine act of self-limitation (2001c; 2002a:114; 2004:85; 2009b).

God brings forth the world through an act of self-limiting freedom in a panentheistic relationship. 'God creates the world by letting his world become and be in *himself:* Let it be!' (1981:109).

Utilising this concept Polkinghorne advocates a careful path between what he sees as two unacceptable extremes: a too-rigid determinism resulting from the exertion of divine will, and a too-open autonomy which could readily degenerate into chaos if God is merely a deistic spectator. 'We reject the deistic idea that God simply lit the blue touch paper to set off the big bang and then left the world to its own devices' (Polkinghorne, 1988a:54). Scientific cosmology presents the universe as a continuously unfolding *process* with an open-ended character. The theological implication is that God is present *in the process* - though not as its sole determinant. The role of chance signals 'the Creator's allowing the universe to make itself' while necessity signals 'the Creator's beneficent purposes for his creation' (Polkinghorne, 1996a:47). Such freedom and reliability are the very gifts to be expected from a Creator whose nature is both loving and faithful; what is discovered is a creation which displays 'characteristics of both openness and regularity… reflected in the physical interplay of chance and necessity in the process of the world' (Polkinghorne, 1991:83). This robust reformulation of *creatio continua* is entirely consonant with the scientific understanding of a finely tuned continuously developing universe – apart from the complete contrast in how the universe ends.

Cosmic Futility and Eschatological Endings

The scientific consensus on the ultimate end of the physical universe must be taken seriously by a critical-realist theology and certainly yields vital theological implications, but must also be mitigated by two factors:[324] first, the phenomenal time-scale of this ending, and secondly the high plausibility of 'terminal endings' on a much more human time-scale. Cosmologists, perhaps unsurprisingly, seem less concerned with the end of the earth than with the ultimate fate of the universe. As J. Davis notes, 'Despite the revolutionary new scientific discoveries… the fundamental scientific outlook is still the

[324] A third factor is the simple recognition of the incompleteness of scientific knowledge. So little is yet known or understood about the universe's dark energy 73% and dark matter 23% that further knowledge might quickly shift the consensus again, as it has in past decades. Current projections of the end of the universe may require reformulation. Wilkinson suggests one such possibility in the concept of quintessence (2010:14).

same; thermodynamic pessimism finally prevails' (1999:25).[325] But the notion of cosmic futility which resonates so strongly with cosmologists and astrophysicists begs the question, 'futile to whom?'

In every realistic scientific scenario, humanity (and indeed the earth and all known life) will have disappeared billions of years before the universe winds down, and with humanity any recognition of futility.[326] Nor are cosmologists projecting this futility onto a notional God; even if they were, there is no particular reason to assume the universe will not have sufficiently served God's purposes by that end – or that God could not create another universe, or indeed any other unimagined scenario. This sense of futility must reside with humanity and in fact relate more directly to the end of humanity and the earth than the universe. Nevertheless, the prevailing view in the science-theology dialogue ties these concerns together. As Polkinghorne points out, 'The spatial scale of much theological thinking is terrestrial, its timescale that of human history. Yet theology's real concern must be able to embrace the whole of created reality and the totality of cosmic history' (2000a:11). If cosmic futility is a theological concern, there may be value in considering both far-future and near-future eschatological endings in relation to their potential consonance with the biblical new creation.

Far-future Endings

The victory of endless expansion and increasing entropy is a long and gradual process over unimaginable lengths of time; there is no single 'point' at which the universe can be pronounced dead. Star formation will cease in 40-50 billion years and in 10^{12} years the massive stars in the galaxy will have become neutron stars or black holes (Russell, 2002b:271). Using Dyson's projections, J. Davis concludes that all stars will have exhausted their hydrogen fuel and burned out by around 10^{14} years. Concentrations of matter then drift endlessly apart or coalesce into black holes until by 10^{64} years even these black holes deteriorate into Hawking black body radiation. By 10^{65} years the quantum effect of 'barrier penetration' diffuses the molecules of any remaining solid objects and

[325] See Davis (1999) for a brief historical summary of this pessimism.
[326] One exception is the consideration that humanity migrates to other parts of the galaxy (Polkinghorne, 2002a:8), but such a notion is highly speculative, only postpones the inevitable, and does not reflect consonance with the biblical view of the NHNE.

by the incomprehensible timescale of 10^{1500} years, all elements will have dissipated into radiation or microscopic grains of iron dust (Davis, 1999:21).

On a scale far nearer, yet still well beyond our human timescale, the most certain eschatological scenario is the demise of our own sun.[327] Already 5 billion years old, the sun may continue burning its hydrogen core up to another 5 billion years, but once its fuel is exhausted, the core will contract and heat up while its outer atmosphere will expand, encompassing Mercury, Venus, and Earth in its 'red giant' phase before collapsing into a dense remnant 'white dwarf'. But life on earth is not likely to see that day. Lovelock estimates the earth's lifespan to be about 500 million years before becoming a dead planet, due to the sun's increasing intensity overwhelming earth's ability to shield and absorb enough radiation to preserve life (2009:154).

The sun is not the only potential culprit. William Stoeger (2000) provides a detailed account of the major catastrophes which could impact the earth with devastating or terminal effect, noting three additional cosmic scenarios: the supernova explosion of a nearby star, the collisional coalescence of two orbiting neutron stars to form a black hole, and the collapse of a massive near-earth star. The most likely and lethal of these in proximity to earth is a known neutron star system predicted to collapse in 410 million years. Stoeger also details the likelihood of impacts from various types of comets and asteroids, which range across a broad spectrum of size and frequency and can in turn produce devastating after-effects.[328] Those of magnitude 10km diameter or above, such as the Chicxulub impact in Mexico 65 mya, which contributed largely to the demise of the dinosaurs, are estimated to occur about every 100 million years, while smaller ones occur more frequently.

Scientific and Theological Responses

Such an overview calls into question the eschatological connection made by Polkinghorne and many others between the end of the universe and the end of humanity. Bertrand Russell's oft-quoted lament that 'the whole temple of man's achievement must inevitably be buried beneath the debris of a universe in ruins'[329] perfectly exemplifies this dubious

[327] See Stoeger (2000:24-5), Wilkinson (2010:9-10), Polkinghorne (2000b:8).
[328] Ward and Brownlee (2004:ch8) describe the consequences of such impacts, also documenting a number of other potential though less-likely planetary catastrophes.
[329] In Russell (2008b:567).

existential link. One need not wait for the demise of the universe (at whatever timescale is chosen) to encounter the collapse of all human achievement, human existence, or biological life. Wilkinson's call for an integrated consideration of 'the physical creation, the human body and the end of the Universe' (2010:26) is certainly needed but only makes sense at the intersection of their existence. The functional universe is dead long before its far-future ending, and a functional earth is dead aeons before that. If the 'life' of the universe relates to self-awareness through humanity's biological complexity, then the death of the universe should likewise be narrowed to that end – on a far more human-centred time scale. And yet, such is not the case.

The genuine malaise amongst scientists and philosophers who peer into the inconceivably distant future may seem surprising since 'futility' is not a scientific issue - but in fact reflects deeper existential questions of meaning and significance. Paul Davies suggests this existential pointlessness has had 'a profoundly depressing effect on generations of scientists and philosophers' (1994:13). Fraser Watts believes the 'moodiness about cosmology' and preoccupation with the end of the universe says more about us than it does about the universe. Rather, he asserts the bleak predictions of the future are in part, 'projections of spiritual realities and concerns onto the scientific or political arenas' (2000a:49). A few scientists have tried to combat this trend with optimistic speculation of modified forms of non-physical life surviving indefinitely in a dying universe – but with little success.[330] Davies offers a unique approach to the dilemma:

> If there is a purpose to the universe, and it achieves that purpose, then the universe must end, for its continued existence would be gratuitous and pointless. Conversely, if the universe endures forever, it is hard to imagine that there is any ultimate purpose to the universe at all. So cosmic death may be the price that has to be paid for cosmic success. (1994:155).

Whether or not one agrees with this logic, the centrality of 'purpose', or more particularly 'achieving a purpose', once again shifts the discourse from a scientific outlook to the theological arena.

Moltmann does not critically engage with this scientific outlook, despite his stated desire to work out 'points of access' between science and theology in terms of concepts of time

[330] Notable attempts by Freeman Dyson, Frank Barrow and John Tipler to find hope in postulating extremely adapted forms of life clinging to a type of non-physical existence in the remotest reaches of time, have not gained many admirers. See J. Davis (1999), Wilkinson (2010:18-20), Polkinghorne (2000a:32-3), Fergusson (1998:87ff).

and space (1996:261). He agrees that a universe destined to end in catastrophe 'has no meaningful development… and no purposeful progression' (2002a:254) but then resorts to a theological outlook, proposing that this physical universe (transitory and contingent) will ultimately be transformed into the future 'new universe' (eternal and permanent), providing meaning through the eternal presence of God (2002a:260). In doing so he reverts to a wholly theological cosmology, developing a framework of time unrelated to the time scale of the physical universe, and an eschatological 'space' for a new creation without reference to physical 'space' itself.

Polkinghorne engages with science in a way Moltmann does not, but similarly finds no basis for hope within cosmic eschatology itself. Far from being immune to science's pessimistic outlook, he writes frequently on the 'futility' of the physical universe as a very real challenge for theology.[331] His conclusion however (reminiscent of Moltmann's) is to look beyond the physical universe for meaning and purpose:

> I do not think that the knowledge of the universe's death on a timescale of very many tens of billions of years raises any greater theological difficulties than does the even more certain knowledge of our own deaths on timescales of tens of years. If there is hope, either for the universe or for us, it can only lie in the eternal faithfulness of God. (2004:86).

This 'eternal faithfulness of God' is as yet undefined but clearly shaped by a God who must somehow, in Polkinghorne's view, overturn or overcome the trajectory of the physical universe.

Human-scale Endings

Setting aside the far-future timescale, at the intersection of cosmic and earth-based eschatologies we find a high plausibility of human extinction. Such catastrophes have happened before in earth's history and will certainly happen again. Palaeontologists have documented five great mass extinctions arising from both asteroid impacts and a variety of other causes.[332] The most pervasive of these was the end-Permian, resulting in the extinction of over 96% of marine species and over 70% of land species, caused by prolonged volcanism, oxidation of carbon, receding seas, and the resulting impact of both short and long-term climate change (Stoeger, 2000:22-24). Most importantly, all mass

[331] See Polkinghorne (2000a:30-32; 2001b:59-60; 2002a:21-27; 2004:85-87; 2008:34).
[332] See Ward and Brownlee (2004), Benton (2003), D. Alexander (2008:104-8). Numerous minor extinctions have also been documented, but mass extinctions are different qualitatively as well as quantitatively.

extinctions are the result (directly or indirectly) of severe climate change,[333] with bio-diversity recovery periods ranging from 10-100 million years.[334]

Many scientists believe we have already entered a new period of mass extinction.[335] While estimates vary widely, palaeontologist Michael Benton examines several models to arrive at a total global extinction rate of 1.75% (5,000-25,000 species) per year. Even without the increasing pressures of climate change, extrapolating from this rate indicates life on earth could become extinct in as little as 800 years (2003:289-90). Maslin notes that 'extinction rates are currently 100-1,000 times higher than the background natural rate' (2014:86), suggesting that 'planetary boundary limits' for irrevocable biodiversity loss have already been crossed (2014:166). Even at lowest estimates this far exceeds the speed of previous mass extinctions caused by cataclysmic events.[336] The difference is that in this 'Anthropocene extinction',[337] human activity – rather than any external catastrophic event – is seen as the root cause. Lovelock represents the growing consensus of scientists who see human-induced climate change as the single greatest existential threat facing humanity and the earth. He views the entire earth system (including humanity) as an integrated whole, experiencing severe environmental stress. As goes the biosphere, he argues, so go human beings. 'We are utterly dependent upon a healthy planet for survival' (Lovelock, 2009:23).

Summary

This survey of potential 'endings' demonstrates an eschatological fate for humanity and the earth quite separate from that of the universe. Polkinghorne's assertion that 'the importance of the fact of cosmic collapse or decay is not diminished by its being so many billions of years in the future' (2002a:11) may represent the mainstream of science-

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[333] Ward and Brownlee (2004:160) explain, 'There is no mystery about what kills organisms: too much heat or cold; not enough food (or other necessary nutrients); too little (or too much) water, oxygen, or carbon dioxide; excess radiation; incorrect acidity in the environment; environmental toxins; and other organisms.' All but the last fall under the aegis of climate change.

[334] Benton (2003:153-5) sees 10 million years as the minimal time for biodiversity to reach pre-extinction levels, but Ward and Brownlee note that after each mass extinction, 'biodiversity has not just returned to its former value but has exceeded that value' (2004:171). Cf. D. Alexander (2008:106-8).

[335] Benton (2003:ch12), D. Alexander (2008:104), Maslin (2004:99), Lovelock (2009).

[336] Extinction rates are very difficult to determine in these distant past events, but while only a fraction is instantaneous (due e.g. to asteroid impact), the rest follows in a chain reaction of natural disasters and related climate changes over a period of several million years. Benton (2003:ch 6).

[337] The term 'Anthropocene' is still under consideration as a geological time period but has been widely adopted as a term recognising the period of time in which human activity has significantly altered the planet. See Ellis (2018), Lewis and Maslin (2018), Northcott (2017), Zalasiewicz et.al (2010).

theology dialogue, but blurs the lines of relevance and significance. Cosmic collapse or decay can be of no concern to a universe unaware of its own existence. Theology's sphere of engagement must indeed expand beyond its anthropocentric timescale of human history to embrace a larger created reality, but questions of ultimate significance are only meaningful within the framework of human existence in relation to God. Gingerich is one of the few cosmologists to respond to this timescale dissonance, finding it unimaginable that *Homo sapiens* will endure for any great length. 'Our universe is going to go on for billions of years without us. Our temporal span is as fleeting as our spatial position is miniscule' (2002:231). The universe's significance to God *without* human life is a question of pure speculation; the timescale of meaningful eschatological relevance must be narrowed to a life-centred one.

Theological eschatology runs precisely along this line of thought. We have seen that 'life' is defined not by physical existence, but by relationship to God – the source of life. The only *end* which really concerns humanity is the one which defines not the end of the universe, but the end of life as we know it, life in relation to God.[338] Such an 'ending' is addressed in chapter 7, and the life to follow by corporate eschatology in chapter 8. A valid theological eschatology may not depend on whether or not the universe ultimately ends, just as a valid theology of creation can stand in relation to God regardless of whether the universe had a beginning. The eschatological question of significance is then not how long the universe endures, but what is the nature and duration of eternal life? If eternal life is in any way contingent on continuity of the present earth, then theology and science both have a paramount interest in preventing the existential threat of climate change and reversing the trajectory of an Anthropocene extinction, but not an equivalent concern for the far-future endings of scientific eschatology.

In all of this the question of 'time' becomes central. The 'timescale dissonance' mentioned above becomes irrelevant if the biblical concept of eternal life equates to an eternal duration – thus coalescing with the immense timescale of scientific eschatology. Alternatively, if 'eternity' implies an existence 'outside of time', this would seem to place new creation in complete discontinuity with present creation, questioning its relationship to the temporal universe. Not only theology, but science and philosophy offer possible

[338] Kathryn Tanner uses this strategy to explore a Christian eschatology which accepts the scientific scenario, suggesting 'a Christian hope that can cope with and make sense of the end of things that scientists describe' (2002:224) rather than positing a divine transformation of the universe.

interpretations of time which differ from that of human experience. But are such formulations valid or plausible? The proposal of a distinct 'eschatological time' will be assessed in chapter 8, but here we turn to an exploration of the nature of time and the time-space universe, alongside a biblical and theological perspective on time and eternity. The level of consensus has critical implications on whether further consonance can be found between scientific and theological eschatologies and the new creation.

God, Time and Eternity

The problem of God and time is uniquely challenging because of its complexity and the bewildering diversity of perspectives involved. Scientific cosmology informs us the universe is a space-time continuum where time and space are completely integrated. Theologically this would seem to imply that since God created time and space coterminous with the universe, therefore God exists outside of time.[339] This raises further philosophical questions as to whether God is timeless, or exists in a time intrinsic to God's own nature, which then raises questions of how a timeless (or temporally distinct) God *relates to* a temporal universe. Science, philosophy and in some cases theology – also question whether the universe itself is temporal, or whether time is in fact a subjective experience. The further one digs, the greater the problems become. As relates to this thesis, the problem is primarily theological: first, a tendency to vacillate (whenever convenient) between a God existing both in time and outside time simultaneously – a philosophical dilemma;[340] second, a common theological tendency (both academic and popular) to consider that if God is outside of time, then eternity with God is also outside of time, therefore life after death is outside of time – and perhaps so too the new heaven and new earth. This creates an enormous amount of theological speculation unchecked by critical realism.[341]

Another way of approaching the problem is the question of what is the *relationship* between time and eternity (and correspondingly eternal life)? This question requires biblical and hermeneutical insights which may challenge or constrain both theological and philosophical speculation. A vast amount of literature exists in the exploration of

[339] 'Outside' may signify both 'beyond' and causally 'prior to' (although temporal words like 'prior' are problematic in themselves). How God likewise exists 'outside' of space is equally challenging philosophically but has not created the same theological quandaries.
[340] 'The problem of simultaneity' is a well-known conundrum in both science and philosophy.
[341] See Examples in Paul Mills' synopsis of varying theological views (1998, 2002); also Olson (2015).

time from all of these perspectives, and this section can only provide a very rudimentary assessment. Our purpose is not to seek conclusive answers but to determine the most *probable* and *plausible* metaphysical conditions in which a future new creation may be construed, taking into account the insights and perspective of each discipline and the constraints placed upon each by their counterparts.

Biblical Insights

Recalling the brief discussion in chapter 4, we must first disentangle the terms 'eternal life' and 'eternity'. The term 'eternity' is exceedingly rare in the Bible; only thrice out of 440 times in the OT (NIV) is the Hebrew *'ôlām* translated as 'eternity',[342] and the word is not found in the NT. The Greek *aion* and its adjectival derivative *aionios* have a durational quality not parallel in the English abstract meaning.[343] Not only is its *use* absent, but the very concept of eternity as an abstract metaphysical formulation is absent from Hebrew thought. 'There is general agreement that Old Testament thought "has no natural tendency to abstractions"' (Jackelén, 2005:65). Nevertheless, the Bible is not silent on the issue. While 'eternity' is not found, 'eternal' is plentiful, and the Bible unequivocally applies this description to God: 'Abraham… called upon the name of the Lord, the Eternal God' (Gen 21:33). Craig notes:

> In contrast to the pagan deities of Israel's neighbors, the Lord never came into existence, nor will He ever cease to exist. As Creator of the universe, He was there in the beginning and will be there at the end. (2001:14).

However, any assumption that 'eternal' therefore carries a timeless rather than durative quality is quickly overturned by its majority temporal use elsewhere. Numerous passages depict God's eternalness by describing it in temporal terms,[344] and *'ôlām* is far more frequently translated in durational terms such as 'everlasting' (56 times) and 'forever' (over 200 times).

[342] In Ps 93:2 and Pr 8:23 it is a metonym referring to God's action before creation. Ecc 3:11 'He has also set eternity in the hearts of men' is used in the context of 'a time for everything' – a temporal connotation. The application of *'ôlām* to created entities such as sun and moon further contrasts with a timeless interpretation in reference to God. (2005:65).
[343] *Aion* is translated most frequently as 'forever', 'ever', 'age' or 'ages', depending on context; it may refer to future, past, a finite period of time, or a perpetual duration. For this reason, it is not translated as 'eternity'. See discussion of *aion* in Verbrugge (2000:70-76); Cullman (1962:51); Ganssle (2002:11).
[344] Two examples, my italics: 'Lord, you have been our dwelling-place *throughout all generations*' (Ps 90:1). '…but you [O Lord] remain the same, and *your years will never end*' (Heb 1:12).

Time in Hebrew thought was ordered by events, and not the other way around. Jackelén explains, 'Israel never understood time as something separate from the respective event… every event has a definite place in the time-order' (2005:65). Cullman adds, 'The emphatically temporal character of all expressions of faith is connected in the New Testament with the Jewish valuation of time' (1962:37). The Israelites' knowledge of God was relationally based on a God who acted in their history. The prevailing biblical view is one of temporality. Therefore Padgett asserts, 'The Bible knows nothing of a timeless divine eternity in the traditional sense' (1992:33) and Jackelén, 'The eternality of God should not be understood as timelessness, but rather as the fullness of time and power over time' (2005:65). Taking a slightly different approach, Wright proposes that 'narrative is the most characteristic expression of worldview' (1992:123) and Bauckham and Hart add that 'the shape of time has been determined by the biblical metanarrative of the world's history with God' (2000:46-7). Moltmann, Wolterstorff and Jackelén likewise see narrative as the normative biblical approach to time, replete with God's participation in historical, temporal events and processes. 'God is represented in Scripture as One who has a history of acting and responding' (Wolterstorff, 2002:187). At the heart of this narrative is the idea that God actually *enters* human history in the incarnation of Jesus and *acts* in history in a unique way in his resurrection – with considerable eschatological implications to be explored in chapter 8.

Moltmann goes well beyond a sequential narrative approach, asserting a complex notion of 'interlaced times of history' (1985:124ff) in which past, present, and future intermingle. By this he is not asserting an 'eternal-temporal' dichotomy (as will be seen shortly), but a view that God superintends history with a teleological future in mind, which God will bring about through events in our present. This is most clearly seen in the expectation of a future resurrection, brought forward into the present in Christ, now seen as a past action assuring our future Christian hope. Moltmann thus speaks of 'the presence of God's future' in referring to the risen Christ (2007a). His portrayal of a 'historical concept of time' in dynamic relationship with 'God's time' permeates his writing – and he is certainly not alone in this idea.[345] But Moltmann presses this conviction thoroughly (2000c:27ff) asserting a confusing seven dimensions to a historical

[345] Jackelén likewise speak of time as multi-dimensional in the dynamic inter-relationship between God's time and human history (2005:185-6). She prefers the metaphor of a dance to show the qualities of movement, openness, and spontaneity (2005:56-7). Welker also speaks of the 'perichoresis of times' (1998:325).

theory of time.[346] Nevertheless, with the exception of his 'eschatological moment' all of these uphold a narrative framework in which God acts in history.[347] Such a history places God distinctly in time. In summary, biblical insights lead overwhelmingly to a temporal view of God *in relation to* the world.

Theological Insights

On what basis then, do many theologians justify turning away from such strong evidence to support a view of divine timelessness? The problem is inherent in the belief that whatever time is, it was created by God as a property of the physical universe. To preserve God's uniqueness from creation, God must in some way 'transcend' time. As Padgett observes, 'Spacetime as we know it has a beginning – but God does not… Thus God must be beyond time as we know it, in some sense' (2002:12). Historical arguments to this effect have lent credibility to conceiving this as the 'traditional' view.[348] However, theological arguments about divine nature too often take place in isolation from creation, thus becoming excessively speculative. The nature of God's eternality *apart from* creation is not of concern here, but rather God's nature *in relation to* creation. In order to form any meaningful conclusions, theological arguments must demonstrate how God's eternal nature impacts relations between God, time and the world. In theory, both God and creation may be posited as timeless or temporal, offering four relational possibilities, but while science and philosophy both have strong advocates for an atemporal or 'stasis' universe, theology does not.[349] The two remaining possibilities include either a timeless or a temporal God relating to a temporal creation.

In whichever way God is conceived *apart from* creation, creation seems to mark a change.[350] There is a 'before creation' phase and an 'after creation' phase in God's history. Even if God existed immutably prior to creation, creation marks a first change

[346] These include the decisive place of the present, irreversibility, ontological modalities, subjective experience, the role of past and future in the present, the temporal concept of eternity, and death as the exit from time.
[347] The exception is Moltmann's troubling notion of 'eschatological time' or the 'eschatological moment' in which all times become simultaneously 'fulfilled'. This will be explored in chapter 8.
[348] Persuasive arguments have been made for God's timelessness by appealing particularly to ideas about God's divine nature, such as 'immutability' and 'simplicity'. Philosopher-theologians such as Augustine, Aquinas, Anselm, and Boethius have all upheld timelessness on this basis, thus the 'traditional' view.
[349] Paul Helm is perhaps a singular exception (2000, 2002). In asserting both divine timelessness *and* the atemporality of the universe, he seems to be unique amongst theologians Craig (2001:111).
[350] Creation here refers to the material or *ex nihilo* creation of the universe, not the biblical account.

and signifies a form of temporality for God's existence (Padgett, Wolterstorff). Philosopher William Lane Craig frames it this way:

> Once time begins at the moment of creation, either God becomes temporal in virtue of His real relation to the temporal world or else He exists just as timelessly with creation as He does without it. If we choose the first alternative, then, once again, God is temporal. But what about the second alternative? Can God remain untouched by the world's temporality? It seems not. For at the first moment of time, God stands in a new relation in which He did not stand before (since there was no "before"). Even if in creating the world God undergoes no *intrinsic* change, He at least undergoes an *extrinsic* change. (2001:87).

Unless the universe were co-eternal with God (which both science and theology reject), creation marks a change in God's relational existence, which is subsequently shaped by humanity. As Ganssle articulates, 'No theory of God's relation to time will be adequate if it does not allow for genuine interaction between God and his people' (2002:11).

At this point, those anxious to affirm both God's transcendence and immanence will often assert that God is both temporal *and* timeless. But as Craig points out, 'in the absence of some sort of model or explanation of how this can be the case, this assertion is flatly self-contradictory and so cannot be true. (2001:15). An entity must exist one way or another. Philosophical arguments around this possibility are too complex to assess here, but Craig claims that by definition, temporality and timelessness are contradictories. God exists at every moment of time there ever was – including (speculatively) God's own intrinsic time apart from creation – but this specifically does *not* mean God exists at every time at once, which Craig calls 'an incoherent assertion' (2001:15). Although advocating for a theoretical *possibility* of a timeless God, he rejects that possibility within the framework of God's relation to the world. This critical-realist approach constrains theology from such speculation and argues for a definition of transcendence which does not entail timelessness.

Despite some consensus on God's temporality *in relation to* the world, many (including Craig) find the idea of a temporal God *apart* from the world deeply unsatisfactory. Rejecting the idea of God's everlasting duration in infinite 'empty' time, philosophers have taken up the challenge of proposing a model of simultaneous timeless and temporal existence. Whilst historical attempts have failed to withstand critical evaluation,[351] more

[351] The most well-known derive from Boethius' hilltop analogy, where an observer on the hill (God), is able to watch the entire progression of persons (humanity) below 'all at once'. This has been deemed unsatisfactory since the observer at the top and those below are equally situated in time.

recent models such as Stump and Kretzmann's (1981) 'eternal-temporal simultaneity' and Brian Leftow's (1991) 'quasi-temporal eternity' have responded to that critique but likewise failed to convince (Craig, Wilkinson).[352] Helm concludes, 'the project of combining eternalism and temporalism… is in my view doomed' (2002:161). Many like Wolterstorff and Padgett[353] find no problem with a temporally 'everlasting' God,[354] while Craig proposes a solution in which a timeless God *becomes* temporal by virtue of creation. Wilkinson posits the interesting idea that 'we may need to see time as a fundamental part of eternity' (2010:126). This reflects Moltmann's suggestion that 'in contrast to the eternal, there is only one time. The present is the *temporal concept of eternity*' (2000c:30). Ultimately these attempts to ascertain God's autonomous nature have little bearing on the overall consensus that in all ways in relation to the world, God is necessarily 'in time'.

Scientific and Philosophical Insights

Contrary to these biblical and theological insights, the possibility of an atemporal universe – in which time is purely relative, and the experience of past, present, and future merely subjective perception – has been proposed in both science and philosophy. In philosophy this can be traced to the groundbreaking 'stasis theory' of J.E. McTaggart in 1908 and the concept of 'tenseless language'[355] proposing that time is not real, and in physics to Einstein's 'special and general theories of relativity' (SR and GR) in 1905 and 1915, which led to the 'block-universe' view of time and space.[356] Both have deeply influenced discourse on the nature of time and must be taken into account in seeking a view of God and time plausible to critical-realism and science-theology discourse. A scientific consensus on stasis time could create an intractable conflict with the biblical-theological assessments above and raise serious questions regarding perceptions of an

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[352] Wilkinson (2010:124-5) lists a number of criticisms from both theological and scientific perspectives. See Craig's critique (2001:89-90) stating in summary there is simply no mode in which a temporal and timeless entity can exist at one and the same_____. There is nothing to fill in the blank.
[353] Padgett's (2000, 2002) proposal of 'relative timelessness' is not in fact timeless at all, but a view of divine temporality as distinct from measurable, created time.
[354] Scholars refer to such divine temporality in different ways: undifferentiated time (Oxford School), super-time (Barth), or embedded hyper-time (Craig). In common to all, God exists temporally within himself and creates the universe 'with time', physical, measurable, and embedded in his own temporality.
[355] McTaggart's theory first appeared in the philosophical journal *Mind* (1908); he subsequently defended the theory against his critics in a more substantial work (1927).
[356] The 'block-universe' represents 'a spatialization of time' and an emphasis on an ontology of being over becoming' (Russell, 2000:51). Time is only relative to the observer, thus no universal past, present or future. For accessible descriptions of SR see e.g. Stannard (2008), or Craig's own exposition (2001:32-44).

open future, as well as the supposed real relations between God, time, and human existence. Although both theories are far too complex to assess here, many scholars have sufficiently refuted McTaggart's theory,[357] but a concise overview of the scientific challenges will highlight the way forward.

A renewed interest in the relationship between time and eternity[358] and the recognition of its crucial importance to the science-theology dialogue, has resulted in an outpouring of scholarship,[359] largely attempting to preserve or validate the experience of 'flowing-time' against the background of a 'block-universe' without denying the validity of SR despite the strong support it lends to the latter construct. 'Special relativity along with quantum mechanics are', as Russell points out, 'the two pillars of contemporary physics' (2000:46). 'Without a doubt' writes Craig, 'the paramount consideration leading people to embrace a static conception of time is Relativity Theory' (2001:167). SR led Einstein to adopt the block-universe view writing, 'for us believing physicists the distinction between past, present, and future is only an illusion, even if a stubborn one' (in Craig, 2001:69). This view became entrenched in physics resulting in what Russell calls 'the downfall of the present' in which 'there is no universal, unique "present" – only a "present" defined by each moving observer in an equivalent way' (2000:50). Peters adds that in SR, 'time is tied to each inertial frame of reference…[implying] time is event-dependent' (2000:60).

Crucially however, this is not the *only* feasible interpretation of SR and Craig along with Russell and other physicists point instead to the Lorentzian interpretation. 'The use of SR does not commit us to a deterministic view of the future and a timeless view of nature as entailed by the "block universe"' (Russell, 2000:51). Russell and Craig both note that the 'block universe' view is held by a majority of physicists – but certainly not all. Many in the science-theology dialogue point out that as appealing as it is mathematically, the 'block-universe' is a metaphysical construct contradicted by the understanding that 'the universe has a history' (Gingerich, 1998:09). Temporal passage is a powerful and

[357] See Craig's extensive philosophical critique of McTaggart's stasis time (2001:143-63); Cf. Wilkinson (2010:119-20). Padgett allows that the stasis perspective can be useful but cannot be seen as 'the only "right" way to understand time' (2002:104).
[358] 'Eternity' in this context is generally understood as timelessness – in contrast to the biblical meaning.
[359] Blount (2000), Craig (1998; 2000a; 2000b; 2001; 2002; 2008), Davies (1995), DeWeese (2000), Fraser (2000), Fredrickson (2000), Helm (2000; 2002), Isham and Polkinghorne (1993), Isham and Ward (1993), Jackelén (2000, 2005), Moltmann (2000c), Padgett (2000, 2002), Pannenberg (2000), Polkinghorne (1998d), Russell (1996; 2000; 2008a; 2012), Welker (1998), Wilkinson (2010), Wolterstorff (2000, 2002).

universal human experience; so too is the 'arrow of time' giving the universe an evolutionary history, size and scale observable universally (Wilkinson 2010:119). A mere relativistic ordering seems wholly insufficient. As Craig explains, 'The dynamic time theorist… finds in the objective reality of temporal becoming a basis for affirming time's directionality' (Craig, 2001:161).

Polkinghorne is a staunch proponent of 'flowing time' and has taken up the debate with vigour.[360] He describes this history of the universe in narrative terms as an 'unfolding story' (2005, 2008), arguing that the irreversible 'directionality' of the universe, or the 'arrow of time', is substantiated through thermodynamics, complexification, expansion, and human experience (1998b:46). While agreeing that SR abolished Newton's concept of absolute space and time, 'absolutes remain, though of a different kind' (2008:38). Why then, such an insistence from some physicists toward the block universe model? Polkinghorne regards this as arising from prior metaphysical and meta-scientific convictions. He faults adherents of a block universe for an imperialistic assertion that true reality must be an atemporal state even when key observations mitigate against it (2008:39),[361] contrasting this with an 'open process' model:

> This option presents a metaphysics of dynamic becoming in contrast to one of static being. The future is not up there waiting for us to arrive; we play our part in bringing about its actual character. (1998d:341)

We may conclude that while the standard interpretation of SR has much in its favour, there is no scientific consensus for extrapolating to an ontological 'block-universe' or stasis theory of time.

Summary

By combining the insights of each discipline, we are now able to achieve our goal of determining the most plausible explanation relating God, time and eternity. As Polkinghorne states, 'The nature of time turns out to be a metaphysical question, whose answer is constrained by science, but not fully settled by it' (2008:37). Time as a dynamic 'open process' with a closed past, moving present, and open future is not overruled by the implications of special relativity. Biblically we find that 'eternity' does

[360] See esp. Isham and Polkinghorne (1993), Polkinghorne (1998b:45-48; 1998c:62; 1998d; 2005a:113-119; 2008:36-41; 2011:62-65).
[361] Polkinghorne (1998d) illustrates this by presenting four different meta-scientific explanations of the nature of time, each claiming to derive from contemporary physics.

not exist in the abstract, but 'eternal' has entirely temporal connotations. Both Wright and Moltmann advocate strongly for a narrative interpretation of God's historical action and relationship to the world and Wilkinson asserts that physicists as well as theologians must not underestimate the importance of narrative (2010:124). Theologically, whatever God's eternal existence may be *apart from* the universe (which remains inconclusive), God's eternality *in relation to* creation is necessarily temporal. It follows then, that human beings, as part of the created order, *cannot*, through death – or transition into new creation – enter into a timeless eternal existence, and theological discourse cannot move indiscriminately between time and eternity.

Conclusion

Scientific cosmology indicates a universe of vast dimensions, with an immensely long history and an inconceivably distant future – but which nevertheless diminishes to a seemingly futile end, a cosmic eschatology without hope. How does this relate to biblical cosmology and a theological expectation of eternal life? Any answers must await the more sufficient exploration of biblical cosmology in the following chapter, and its conclusions will encompass both. The one possibility already explored lay in postulating a new heaven and new earth in discontinuity with the *time* (and thus the future ending) of the physical universe. But our assessment has rejected this notion in favour of a strong continuity with our present experience of time. In other words, time is consonant within the biblical, theological and scientific perspectives. God demonstrates temporality by virtue of creation and his relationship to it. Eternity – or more accurately, eternal life in the new heaven and new earth – lies in temporal continuity with present creation, and the challenge of scientific eschatology remains. Solutions proposed by Polkinghorne, Moltmann and Wright to this eschatological dilemma will be explored in chapter 8, but first we explore biblical cosmology and eschatology on their own terms.

Chapter 7
Issues of Continuity in Biblical Cosmology and Eschatology

'But we are looking forward to a new heaven and earth'
2Pet 3:13

Introduction

This chapter continues an assessment of cosmic eschatology, turning to the biblical perspective. Until the advent of modern science, cosmology was understood within a religious framework, seeking to apprehend the relational dynamics and interconnections between whichever cultural gods were acknowledged, the heavens or the realms of those gods, the earth and human-centred realm, and the nature and realm of an afterlife. Ancient Hebrew (biblical) cosmology was no exception.[362] Unlike the scientific account, these aspects formed a holistic picture with no separation into categories of physical and spiritual or material and immaterial. Biblical cosmology is a conceptual worldview combining two dimensions: 1) elements of nature and structure (i.e. cosmic geography); 2) concepts of meaning, purpose, function and relationship (consolidated as 'temple theology'). Cosmic *eschatology* should therefore be understood as the big-picture narrative of 'heaven and earth' moving teleologically from creation to new creation. It forms the context for individual and corporate eschatology but cannot be separated from it, as humanity is central to the functional and relational meaning of the narrative. Its teleological 'endpoint' is the 'new heaven and new earth' and a controlling feature of its narrative is the concept of the temple. For this reason 'temple theology' has attracted a growing number of scholars who identify the temple concept as a central thematic thread running through Scripture,[363] connecting creation to new creation and providing a strong framework for continuity (chapter 9). We briefly explore 'cosmic geography' before assessing the value of temple theology and its eschatological implications.

Cosmic Geography of the Ancient Near East

It must be emphasised that the 'universe' of scientific cosmology was completely unimaginable in Ancient Near Eastern (ANE) thought; the familiar globe of the earth would have been unrecognisable; sun, moon and stars were believed to be within, not

[362] Ancient Hebrew cosmology is the foundation of biblical cosmology. Additions and adaptations of both later Judaism and the NT are incorporated without challenging the underlying worldview assumptions.
[363] Beale (1997; 2004; 2005), T.D. Alexander (2008), Alexander and Gathercole (2004), Fletcher-Louis (1997), Garvey (2019), Middleton (2014), Walton (2007, 2009).

outside the domain of the earth, and the surrounding heaven was as real and solid as earth, even if unseen. Scholars who insist on the term 'universe' to describe the biblical cosmology of 'heaven and earth' risk confusing the modern materialist description with an ancient 'worldview' in which physical and metaphysical are inextricably linked.[364] Denis Lamoureux's detailed study of the 'three-tiered universe' of ANE cosmic geography (2019) clearly identifies its main structural components but fails to interpret these in terms of their broader relational worldview. In so doing, Lamoureaux dismisses any notion of heaven and earth as a cosmic temple, because it isn't pictured that way. But the temple concept represents the relational dimension between God and humanity or heaven and earth, not the structural components of its cosmology.

While ancient Israel's interpretation of meaning and relationship was distinctive, its 'cosmic geography' was similar in many ways to the surrounding ANE cultures:

> Egyptians, Mesopotamians, Canaanites, Hittites, and Israelites all thought of the cosmos in terms of tiers: the earth was in the middle with the heavens above and the netherworld beneath… The heavens where deity dwelt were above the sky, and the netherworld was beneath the earth. (Walton, 2007:166)

The middle-tier of the earth was generally conceived as a single disk-shaped continent, surrounded by the gathered waters of a 'circumferential sea' (Lamoureaux, 2019:171), beyond which high peripheral mountains suspended the sky above (conceived as a dome or tent), and beneath which the 'pillars of the earth' separated the land from the cosmic waters below. The *rāqia*' (dome or firmament)[365] was a solid barrier separating the heavens above (God's domain – the upper-tier) from the heavens below[366] and on which the stars were engraved, moving in designated tracks through their ordained stations (Walton, 2001:112). Sun and moon circled along the sky-dome above the earth to the lower-tier of the netherworld (*sheol*) below. 'Flowing all around this cosmos were the cosmic waters, which were held back by the sky, and on which the earth floated' (Walton,

[364] E.g. Lennox (2011:139) mistakenly states, 'It is surely fair to say that most people throughout the ages have understood Genesis 1:1 to be referring to the creation of the physical universe…'. In fact this can *only* be true of the modern age when cosmology shifted from an earth-centric understanding and disassociated the physical description from its metaphysical relationship to the 'heavens' and God. Until then, the 'heavens and the earth' *was* the extent of the universe.
[365] Translated variously as 'firmament' (KJV), 'dome' (NRSV), 'expanse' (NIV), 'vault' (NIV 2011).
[366] DeSilva notes that the plural 'heavens' included a heaven above a heaven below, but these could be further differentiated. Ps 148 indicates a three-fold division (as does Paul – 2Cor 12:2), and intertestamental literature perpetuated 'widespread speculation on the number of heavens' (1997:439).

2007:166). Precipitation originated from these cosmic waters above, falling through openings in the sky-dome to the earth.

This basic cosmic structure, with mild cultural variations, held sway throughout the ancient world for thousands of years. Walton argues ‘The language of the Old Testament reflects this view, and no texts in the Bible seek to correct or refute it’ (2007:167). What is often interpreted as poetic metaphor is in fact an accurate reflection of the cosmic geography of the time: ‘He stretches out the heavens like a tent, and lays the beams of his upper chambers on their waters’ (Ps 104:3); ‘He set the earth on its foundations’ (Ps 104:5). ‘He sits enthroned above the circle of the earth’ (Isa 40:22). ‘The ends of the earth’ refer to the shoreline of the circumferential sea (Lamoureux, 2019:181).

Two important observations must be made from this cosmic description. First, biblical revelation accommodates to the cultural cosmology of its time. As Walton explains, God did not reveal to Israel ‘a science beyond their own culture’, but rather revealed insights in terms of the cosmological perspective common to antiquity (2009:19). This implies that attempts to interpret biblical language in accord with scientific cosmology (such as ‘firmament’ as earth’s atmosphere or ‘light’ as the birth of the universe) are unwarranted and likely misleading. Contrary to a modern scientific view, ‘cosmic geography was predominantly metaphysical and only secondarily physical/material’ (Walton, 2007:167). Physical characteristics were only of ancillary importance, and ultimately their properties became manifest through the role and interplay of the gods. Here is most clearly seen the value and distinctiveness of the Hebrew monotheistic conception, not just of *one* god, but of *only* one God, in a unique and loving relationship with creation. This Creator God alone endowed meaning and significance to creation through a dynamic relationship between God, humanity and the non-human creation.

Second, it is striking to realise that this cosmic geography hardly features in the creation narrative of Genesis 1-2. The few elements that do appear (sun, moon, earth, firmament) are described by their purpose or function rather than geography. Walton insists that the *structure* of these cosmological elements was only of secondary importance to their *function*.[367] In fact, in ANE thought, structure *derived* from function, to the extent that ontologically ‘something exists when it has a function, not when it takes up space or is a

[367] One of Walton’s key propositions states: ‘Ancient cosmology is function oriented’ (2009:23). Once substantiated, this is presumed thereafter in relation to temple theology.

substance characterized by material properties' (Walton, 2007:167). Any attempt to correlate *creatio continua* with the biblical creation story must therefore take into account the Hebrew emphasis on functional priority over ontological existence.[368] The unfolding order of a continuous creation may be reflected quite differently in relation to function. Most importantly, we find that the metaphysical meaning and functional relationships described in Gen 1-2 are not defined by their cosmic geography but by the relational dynamic of temple theology.

Temple Theology and a Relational Cosmology

Basis of Temple Theology

In contradistinction to scientific cosmology, ancient cosmologies intentionally provided meaning and significance to human society in relation to the cosmos and the gods that ruled it. This human-cosmic connection was most strongly represented by the temple. Temples were of central importance in ANE cultures and Israel was no exception;[369] but this was not due to their being places of worship. Rather, temples were designed to be residences for deities and to provide an appropriate structure in which to manifest symbolically and actually, the relationship between human beings and the god or gods.

> From the standpoint of deity, the temple is his/her estate and residence. The earthly temple was a symbol, an echo, a shadow of the heavenly residence. As such it served as a link, a bond, or even a portal to the heavenly residence. The heavenly archetypal temple can sometimes be identified as the cosmos itself. (Walton, 2007:113-4)

It is therefore no exaggeration for Wright to point out that 'the Temple was the focal point not merely of Israel but of the cosmos' (1996:451). With one God (not merely a god of Israel but of the world), and one temple (located in Jerusalem), there was a profound sense in which *their* temple was the true throne and dwelling place of the God of all heaven and earth, despite the competitive claims of other deities and their followers.

The placement and structure of a temple was vital, involving both the recognition and creation of 'sacred space'. Certain locations were seen as 'portals' through which the gods traversed; high places or mountain tops in particular were regarded as sacred space

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[368] For explanation of the functional rather than material understanding of *bārā'* (create), see Walton (2001:70-72; 2007:181-4; 2009:38-46).

[369] Beale claims, 'It is now widely known that archaeological ruins and texts from the Ancient Near East portray ancient temples as small models of heavenly temples or of the universe conceived of as a temple' (2004:51).

where the gods would naturally 'descend' and humans 'ascend'. In the plains of Mesopotamia this was represented by monumental ziggurats symbolising the connection point between heaven and earth (Walton, 2007:119), a dominant feature of the temple complex.[370] Temple architecture was designed to 'represent and preserve the sanctity of the site, through the establishment of sacred zones, barriers between those zones, and limited sight lines' (2007:118), such that nothing profane was ever allowed to encroach on the temple's domain. Temple gardens normally featured as part of that sacred space, representing fertility and symbolizing the ordered arrangement of the cosmos. They were often built over a spring (real or symbolic) depicting contact with the 'primeval waters' or the 'waters of life', some with graphic representations of four streams flowing from the temple to water the four corners of the earth (2007:123).

In the inner sanctum, 'the deity's presence was marked by the image of the deity' (Walton, 2007:114). This image then mediated the people's worship and sacrifice inward and the deity's revelation and rule outward. Israel diverged from this pattern in an extraordinary way. Their deity was *not* to be represented in man-made physical form at all, thus the strong prohibition against idols or graven images (Dt 5:8-10) and the lack of any representation of YHWH. The true significance of this can only be fully apprehended in light of the designation of human beings as created 'in the image of God' (Gen 1:27) thus linking creation and temple. As Beale asserts, 'Not only were temples as a whole designed to portray the cosmos, but various parts of earthly temples were made to resemble aspects of the entire earth, conceived of as a huge cosmic temple' (2004a:53). At this point the similarities between temple and creation become increasingly clear. If the human-built temple is a symbolic representation of a created cosmos, then the cosmos itself should portray the features and relationships depicted in the temple.[371] Simply put, 'the cosmos is a temple' (Walton, 2009:78). The creation of the cosmos (i.e. heaven and earth) can therefore be read from an ANE perspective *as a temple narrative*. This is

[370] Numerous scholars have suggested the tower of Babel (Gen 11) was precisely such a ziggurat (Walton, 2007:120-1); objections are due to issues of historical context, placing the story nearer to Abraham's time than Noah's.

[371] The biblical temple is designed with the imagery of the cosmos, relates to the functions of the cosmos, parallels the creation of the cosmos, and is viewed as a microcosm, and therefore the cosmos can be viewed as a temple (Walton, 2009:84).

precisely the assertion of Beale, Walton, Wright, and many others who maintain the significance of temple theology.[372]

Walton clearly articulates this well-established connection:

> Since the temple on earth was considered only a type of the larger, archetypal cosmic temple, many images and symbols evoke the relationship between temple and cosmos. The temple is considered the center of the cosmos, and in itself a microcosmos. (2007:123)

No biblical scholar has explored the detailed implications of this premise as thoroughly as Beale (2004a:373), who traces the concept continuously from the Garden of Eden, through the sanctuary-tabernacle-temple development of Israel's history, to its embodiment in Jesus, and ultimately to the eschatological temple of the new heaven and new earth. Such a view significantly shifts the emphasis of Israel's temple from that of a centre of ethnic identity and cultic worship to that of a symbolic structure with cosmological meaning and eschatological implications, a view to which Wright strongly adheres.

Temple Continuity from Creation to New Creation

Perhaps the most valuable theological implication of temple theology is the teleological underpinning it provides in depicting continuity from creation (heaven and earth) to new creation (the new heavens and new earth). Beale highlights the eschatological focus:

> The Old Testament tabernacle and temples were symbolically designed to point to the cosmic eschatological reality that God's tabernacling presence, formerly limited to the holy of holies, was to be extended through the whole earth. (2004a:25).

The eschatological vision of the new heaven and new earth in Rev 21 is best described, in Beale's view, as 'the final end-time temple that will fill the entire cosmos' (2004a:25). Such a teleological perspective is not limited to 'heaven and earth' alone but encompasses God's purpose and commission for humanity *in relation to* the earth and the whole of non-human creation. We need not explore here in detail all the functional elements and relational dynamics of temple theology, but a number of significant aspects should be highlighted in order to provide sufficient rationale for a temple-based eschatological

[372] Beale refers to earlier scholars who held that the OT temple was considered a microcosm of heaven and earth (2004a:31). Fletcher-Louis (1997:160) criticises the 'scholarly neglect' of this view despite its pervasive presence in late second-temple theology and in post-biblical literature, but corroborates the growing consensus of recent scholarship.

development, which in turn underpins the context of continuity in which resurrection takes place (chapter 8).

A) Creation as Temple Inauguration

In Walton's sustained case for interpreting Gen 1 as a temple inauguration (2009), the notion of *functional* creation is paramount. The account moves from an initial state of *tōhû wa bōhû* – frequently translated 'formless and void' but which Walton argues is a hendiadys more accurately representing a 'non-functional' or 'non-productive' condition – to a state of fertility, abundance, and order.[373] Acts of 'separating',[374] 'naming', and 'assigning roles' establish order and relationship; the repeated statements 'it was good' refer to 'functioning properly' (Walton, 2008:57; 2009:51). In all of this, a material creation is not in view;[375] rather, creation is the establishment and inauguration of a well-functioning order in which God comes to 'rest' and 'dwell' in his cosmic temple (2009:87). The inclusion of non-human animal and plant life is unique among ANE creation myths; language declaring each in its place and 'according to their kinds' emphasises order and relationship. The creation of human beings on day six is likewise not material but functional. Man is not simply created, but created *together with* purpose and function, uniquely 'in God's image and likeness', to 'rule over' all other creatures.[376] The provision of food for both humans and animals (Gen 1:27-8) further demonstrates this core relational triangle between God, creation, and humanity.

Crucially, the seven 'days' of Gen 1 are formulaic of ANE temple inaugurations. Beale identifies the parallel narratives of creation and tabernacle-temple construction around a series of sevens,[377] suggesting that Israel's temple is 'modelled on the seven-day creation of the world' (2004a:61). He cites Blenkinsopp's (1992:218) conclusion that 'the place of worship is a scaled-down cosmos'. The accounts have numerous linguistic and structural parallels. Beale and Walton highlight the particular relevance of day seven as

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[373] See Walton (2009:50; 2007:167-70; 2001:72-4).
[374] The first three 'days' involve separating (e.g. light from darkness, waters above from waters below, land from sea).
[375] Despite the apparent novelty of this assertion, Walton argues that 'Material ontology had become so thoroughly accepted that no one was aware that ontology did not have to be material and had not always been so' (2008:56).
[376] Middleton's exegesis asserts *imago Dei* as 'the exercise of power on God's behalf in creation' (2005:88).
[377] The seven days of creation establish the model for the seven 'acts' of the tabernacle construction, as well as the seven years for Solomon's temple building (Beale, 2004a:60ff). Welker likewise notes 'the interconnection between the creation of the world and the construction of the sanctuary' (1995:182).

the climax of an ANE temple-inauguration, when the image of the god comes to rest (i.e. on a throne, the place of rule). In the ANE context, divine 'rest' meant the beginning of divine 'rule'. 'Deity rests in a temple, and only in a temple. This is what temples were built for' (Walton, 2009:72). Rest is not to be interpreted as inactivity, but as a demonstration of sovereignty.[378] 'When the deity rests in the temple it means that he is taking command, that he is mounting to his throne to assume his rightful place and his proper role' (2009:75). An oft-cited biblical example is Ps 132:13-14:

> *For the Lord has chosen Zion.*
> *He has desired it for his dwelling:*
> *"This is my resting place for ever and ever;*
> *Here I will sit enthroned, for I have desired it"*

God's 'rest' on day seven (Gen 2:3) would have confirmed to an ANE audience, if there were any doubt, that this was a definitive cosmic temple narrative. On day seven, God established his rule.[379]

B) The Garden of Eden as the Archetypal Temple

T.D. Alexander argues that 'the opening chapters of Genesis assume that the earth will be God's dwelling place' (2008:15), a situation which tragically ends with Adam and Eve's sin and expulsion from the garden. This may seem at odds with 'cosmic geography' where 'the heavens above' were considered God's domain, but as temple theology indicates, the *whole* cosmos was God's temple; God's presence was never limited by geography, but 'the Lord dwells *in heaven* and in *his sanctuary*' Moltmann (2010:103 his italics). Tension between transcendence and immanence was resolved in the earthly temple: 'Temples in the ancient world were considered symbols of the cosmos' (Walton, 2009:79). In fact they were more than just symbols. Temples *re-presented* the cosmos in numerous, detailed, symbolic ways,[380] but most crucially served as the earthly sanctuary or dwelling place of the god or gods. The temple was thus the meeting point of heaven and earth and as Moltmann claims, 'the centre of the world' (2010:103). Israel's OT temple, as a microcosm of heaven and earth (Beale 2004a:31) was a human scale representation of the cosmic relationships between God, humanity and the whole of

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[378] See Beale (2004a:62-3). In ANE creation accounts this demonstrated victory over the forces of chaos, in human temples, sovereignty over all external enemies as in Israel (e.g. 1Ki 5:4-5; 2Sa 7:11).
[379] Walton points out that in a material account, day seven serves little purpose as nothing new is created, but in a functional creation account, it is this climax which gives meaning to everything else (2009:72).
[380] For detailed exploration of these parallels, see Beale (2004a:66-80; 2004b:197-9), Alexander (2008:20ff).

creation – where God's presence, dwelling and rule was just as real as in the heavens above. This is clearly depicted in the archetypal temple of the Garden of Eden, then later reflected in each subsequent manifestation of Israel's tabernacle and temple construction.

In terms of temple architecture, Eden is best identified as a garden-temple complex (Alexander, Walton) with the requisite features of mountain, spring, zones, and sanctuary. Walton contends that while these features were real, their description concerns their cosmic role (2001:169). Eden was situated on a high place[381] as the headwater to four rivers. 'A river watering the garden flowed from Eden' (Gen 2:10).[382] Eden was thus the source of the life-giving waters and the dwelling place of God, *adjoined to* a garden area (Walton, 2001:168). Beale and Walton both infer from this a tripartite division of the garden-temple complex: Eden (the inner sanctuary of God's presence), the adjacent garden (home to Adam and Eve), and the rest of creation beyond the garden (to which their priestly commission was directed). Additional elements such as the presence of gold and precious stones (Gen 2:12), the two trees in the middle of the garden (2:9), and the East-facing entrance with cherubim guarding (3:24) all find direct structural correlation in the later tabernacle-temple structures of Israel.

The 'image of God' was endowed in Adam and Eve themselves, together with the commission to rule (Gen 2:26) and the commission to go out from the garden to 'fill the earth and subdue it' (2:28). Beale and Walton highlight these as *priestly* roles,[383] mediating God's rule outward to creation as image-bearers and vice-regents, while preserving the sanctity of the garden-temple area '*to work it and take care of it*' (Gen 2:15).[384] The two Hebrew verbs '*ābad* and *šāmar* used in combination are most often translated in priestly terms as in, 'to serve and to guard' the temple; in the Eden-temple then, they should be interpreted not merely in agrarian terms, but as a priestly commission to maintain the garden as sacred space.[385] Image and commission (human

[381] Though not mentioned in Gen 2, it is obliquely referred to as the holy mount of God (Eze 28:14,16).
[382] Such a spring would have been thought to rise from the cosmic subterranean waters below the earth (Walton, 2001:168).
[383] Adam's roles as archetypal 'priest' is of great significance. In later temples, the priest's role was to act as an intermediary between the people and the deity; here, Adam is to act as intermediary between God and creation.
[384] By allowing the serpent access to the garden (Gen 3:1ff), Adam failed in his priestly duty, which, as with later temple priests, included guarding unclean things from entering. Beale (2004a:69).
[385] Cf. Beale (2004a:67), Walton (2001:172-5, 185-7), T.D. Alexander (2008:22-3). The command has little to do with gardening *per se* (even if that was part of the task), and everything to do with serving God through the keeping, preserving, guarding, of the garden-temple. 'Adam's duty in the garden is to maintain

creation and purpose) are completely intertwined, as would be expected in a functional creation narrative.

C) Historical Progression of the Temple Motif

All of these aspects present a compelling case for perceiving the Garden of Eden as the archetypal temple on earth, which then served as an inchoate model for all of Israel's subsequent temples. The reversal of the separation of heaven and earth resulting from Adam and Eve's sin begins to take shape when God creates a new 'people' (Israel),[386] and comes to dwell with them once again in an earthly way in a specially designed mobile tabernacle (Ex 25-29): 'Then have them make a sanctuary for me, and I will dwell among them. Make this tabernacle and all its furnishings exactly like the pattern I will show you' (Ex 25:8-9). Moltmann (2010) refers to this as the *Shekinah* presence, or the particular *indwelling* presence of God. The notion of carefully following the 'pattern' of a heavenly reality is made explicit in Heb 8:5, 9:23-24 and frequently restated during temple constructions.[387]

Beale (2004a) traces in great detail the pattern of cosmic symbolism in each stage of progression from Eden to tabernacle to temples, to embodiment in the person of Jesus, the future temple of Ezekiel's vision, and ultimately to the eschatological temple of the new heaven and new earth. Each temple building incorporates correspondent forms and structures symbolising the cosmos, always in a tripartite division reminiscent of the Edenic pattern. The inner sanctuary of the *holy of holies* symbolised the cosmic dimension of heaven, the dwelling place of God and his heavenly hosts – and like Eden, was God's actual locative dwelling place on earth. The *holy place* was symbolic of the sky, the visible heavens and its light sources, separated from the holy of holies by a curtain or veil (Ex 26:33) – symbolic of the firmament.[388] The *outer court* represented the habitable world including visible representations of earth and sea (Beale, 2004a:32-3). Arboreal and botanical imagery of the garden-motif permeated the entire temple

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it as sacred space, not as a food cupboard. It is a high privilege to serve in the sacred precinct' (Walton, 2001:185).

[386] Fletcher-Louis builds the case that corporate Israel become God's new 'idol' with the restored priestly function of Adam worked out in the microcosm of the tabernacle (2004:88ff). Cf. Wright (1991:23).

[387] The importance of 'pattern' in tabernacle-temple, e.g. (Ex 25:9,40; 26:30; 27:8; Num 8:4; 1Ki 6:12-13).

[388] Poythress (1991) further associates this symbolism with cycles of time, as marked by sun and moon, and divided by Israel into sevens. The curtain itself was of variegated colours of blue, purple, and scarlet material representing sky and cosmos, with interwoven cherubim (Ex 26:31).

(2004a:70-1). This detailed cosmic symbolism is not retrospective conjecture but was well-understood at the time.[389]

Temple-based cosmology does not represent a static state but expresses in physical form the intended teleological progression from creation to new creation. The rule of God was to spread outward from the garden-sanctuary of his presence, through his image-bearing people to the external creation and humanity beyond, thus 'extending the sacred space' (Walton, 2001:186) to all of creation.[390] Israel in this way took on the priestly commission of Adam,[391] and with Israel's failure, Jesus in turn became the embodiment of Israel and the new Adam (Wright, 1991:18ff).[392] He was 'the *image* of the invisible God' (Col 1:15) and his last words on earth re-established the commission (Mk 16:15).[393] Each subsequent temple configuration modelled cosmic structure in terms of the relational dynamics intrinsic to its continuity of purpose within the God-human-creation triangle, and each pointed beyond Israel's cultic centre of worship towards a future ideal. In this prophetic anticipation (e.g. Ezekiel's vision chs. 40-48), 'inter-testamental Judaism naturally awaited a future eschatological time when this would finally happen' (Beale, 2004a:116).

D) Jesus as the New Temple

In Jesus the dynamic proceeds in a wholly unanticipated way, as he appropriates the temple motif to himself. Jesus obliquely compares himself to the temple, John's Gospel confirms 'the temple he had spoken of was his body' (Jn 2:19),[394] and later NT development extends this embodiment to all those who are 'in Christ',[395] a new humanity. 'In him the whole building is joined together and rises to become a holy temple in the

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[389] Beale (2004a:38,46) and Fletcher-Louis (1997:160ff) point to both Philo and Josephus' explorations of cosmic symbolism in the temple: e.g. Philo (*De Vita Mosis* 2:71-145); Josephus (*Jewish Antiquities* 3:123, 179-87). Josephus states, 'every one of these objects is intended to recall and represent the nature of the universe' (*Ant.* 3:180) in Beale (2004a:47).

[390] Beale concludes 'they were to extend the geographical boundaries of the garden until Eden covered the whole earth' (2004a:81-2). In this way the entire earth would have become God's temple and dwelling place.

[391] Wright (1991:21ff) makes the case that the repeated restatement of the Gen 1:28 commission shifts its application from Adam (via Noah), to Abraham, the patriarchs and to Israel. 'Abraham's children are God's true humanity, and their homeland is the new Eden' (1991:23).

[392] In the NT Adam is seen as 'the pattern of the one to come': Rom 5:12-14; 1Cor 15:45-49; Heb 2:6-9. See also Beale's exposition linking Adam-Israel-Jesus (2004a:171ff, 194-97, 295-299) and Isa 43:10-14.

[393] Other versions of the 'great commission' found in Mt 28:18-20; Lk 24:47; Jn 20:21; Act 1:8.

[394] Wright (1996:334-5) argues that 'Jesus… was inviting his hearers to join him in the establishment of the true Temple [himself]', and 'was inaugurating a way of life which had no further need of the Temple'.

[395] See esp. 1Cor 3:16-17; 2Cor 6:16-18.

Lord. And in him you too are being built together to become a dwelling in which God lives by his Spirit' (Eph 2:21-22). Israel's built temples were models which ultimately could not fulfil the prophetic insight that God 'does not live in temples made by human hands' (Act 17:25), or that his sanctuary would be established *forever* (Eze 37:28).[396] In Jesus the dynamic begins to shift from model to reality, and prophecy is fulfilled not in a building but a person: 'I will fill this house [Messiah] with glory, and the glory of this present house will be greater than the glory of the former house' (Hag 2:9). For Moltmann, this *Shekinah* glory, God's indwelling presence among his people, is the core of temple theology (2010:102ff); the belief that God's very presence dwelt in Jesus permeates the NT (2010:111). 'For in Christ all the fullness of the Deity lives in bodily form' (Col 2:9). The glory which departed the first temple (Eze 10:18) at the time of exile[397] comes to dwell forever in Jesus[398] who declares, 'I tell you that one greater than the temple is here' (Mt 12:6).

Jesus then reveals a further continuity with the teleological plan of the Edenic-temple. The glory which dwelled in him would be shared through the Spirit with all those who believe in him.[399] The tripartite structure in the Jesus-temple continues in the pattern of 1) Christ (the dwelling place of God's glory and presence on earth); 2) his people – those 'in Christ' (as a priesthood of believers with an outward-focussed commission); 3) the world (the rest of humanity and all non-human creation) – clearly reflecting the cosmic function and purpose of the original garden-temple. The theophanic 'event' of OT temple inauguration is embodied in the life of the incarnate Christ, and his kingly rule/rest begins upon his ascension to a heavenly throne (Heb 12:2). His death rends the veil of the old temple, symbolising the end of separation and the new condition of unity of God and man, joined in the person of Christ.[400] Yet even this is not the final temple configuration, but points toward an ultimate future fulfilment in the new heaven and new earth. The Jesus-temple is not confined by walls and borders, and its rapid expansion begins with the

[396] See Beale's extensive discourse on these insights (2004a:309ff). Cf. Hag 2:3-9; Eze 37:24-8; Isa 66:1.
[397] Beale, Wright, Moltmann affirm that the *Shekinah* glory of the Lord (1Ki 8:10-11) was never seen to enter the post-exilic temple, nor was there any theophanic event at its inception, and other key elements to the 'pattern' were missing (Beale, 2004a:117). Moltmann suggests the *Shekinah* presence remained with Israel in exile in the form of the Torah (2010:103).
[398] Numerous references attest to this. (e.g. Jn 1:14, 33-34, 2:11, 17:24; 2Cor 4:4-6; Col 2:9).
[399] This sharing of his glory can be seen, e.g. Jn 17:22; Rom 8:17; Eph 2:6-7; 2Cor 4:10.
[400] Together with Beale (2004:189, 212-15) and Wright (2003:635), Fletcher-Louis defends the view that the veil's rending symbolically demonstrates the destruction of the temple and the 'old' cosmic order (1997:164) alongside the traditional interpretation symbolizing a new relationship of accessibility to God.

transferring of authority to his apostles and the outpouring of the Holy Spirit at Pentecost (Beale 2004a:209-212); his resurrection begins the process of *fulfilling* the commission. Wright and Beale see in the inauguration of the Jesus-temple the 'ending' of all that came before, and in his resurrection, 'the first, great act of new creation' (2004a:170).[401]

Toward the Eschatological Temple of the New Heaven and New Earth

The 'Jesus-as-temple' designation provides a fundamentally reshaped hermeneutical basis by which to understand and interpret the eschatological vision of the new heaven and new earth. That 'the new heaven and new earth' *is itself* the fulfilled and perfected cosmic temple is the lynchpin of temple theology. Beale's thesis maintains that John's vision in Rev 21 'is best understood as picturing the final end-time temple that will fill the entire cosmos' (2004a:25). As Moltmann claims, 'The throne of God will no longer be in heaven; it will stand in this cosmic temple which binds together heaven and earth' (1996:313). This is the teleological goal of temple theology and the prism through which all previous temple configurations can be understood.

A) The Problematic Nature of the Eschatological Temple

Temple theology helps resolve a hermeneutical puzzle. John's vision opens, 'then I saw a new heaven and a new earth'; but rather than gazing upon pristine mountains, lakes, and forests, as one might anticipate, John sees 'the Holy City, the New Jerusalem, coming down out of heaven from God' (Rev 21:2) and hears the proclamation, 'Now the dwelling of God is with men, and he will live with them' (Rev 21:3). If the temple *concept* is symbolic of the cosmos (the deity-humanity-creation relationship), and its historical *structures* are symbolic representations of that cosmos patterned on the true heavenly tabernacle, then by appropriating to himself the designation of the temple, Jesus (as God-man-new creation), who came from heaven (Jn 3:13), does not merely claim to be a new *representation* of the temple, but claims he actually *is* the true temple. John's vision therefore expounds, 'I did not see a temple in the city because the Lord God Almighty and the Lamb are its temple' (Rev 21:22).

[401] That Christ's resurrection inaugurates the new creation is widely accepted by scholars. Wright, Polkinghorne, Moltmann, Welker all agree on this point. Relevant passages include: 2Cor 5:15-17; Gal 6:15-16; Col 1:18; Rev 3:14. At issue is what is *meant* by the new creation.

Beale asserts that ‘Christ and his followers are the temple in the new creation’ (2004b:19). Yet how does this correlate visually with John’s description of new creation in Rev 21? ‘Scholars have long recognised the indebtedness of Rev 21:9-17 to Eze 40-48’ (Matthewson, 2003:94).[402] Ezekiel’s temple vision has troubled scholars because its detailed architectural specifications were never fulfilled in the second-temple period, thus indicating a likely future fulfilment referred to as the ‘eschatological temple’.[403] Taken in isolation, the physical structure of Ezekiel’s temple vision seems irreconcilable with Christ’s appropriation of the temple concept. John’s description (Rev 21:9ff) however is structured in strikingly similar architectural terms to Ezekiel’s (though on a vastly expanded scale) yet clearly indicates within the text that the physical structure in fact depicts ‘the bride, the wife of the Lamb’ (21:9) – itself a metaphor for the redeemed community or followers of Christ.[404]

Applying the same hermeneutical principle to Ezekiel’s vision (and by extension to other OT references to a future eschatological temple) provides the theological rationale for interpreting these passages symbolically in reference to the same eschatological reality. The prophets, in foreseeing a greater and more glorious temple to come, describe it in terms of the *structural* temples familiar to Israel; but their descriptions, whether or not they themselves fully understood, pointed in fact not to a new and greater structure in Jerusalem, but to Jesus himself, and ultimately, the ‘Jesus-human-creation’ temple of the new heaven and new earth.

Scholars are of course not all agreed on such a wholly metaphorical interpretation. A literal approach suggests either a future temple structure built in the millennial kingdom (Pentecost, 1958), or an end-time temple (2Th 2:4) during antichrist’s reign (Jeffrey, 1990). Moyise (1995:81) accepts John’s utilisation of Ezekiel’s imagery, but then dismisses the notion of a temple since one was not seen in the city (Rev 21:22). Without

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402 Mathewson demonstrates similarity in order, structure, and features asserting ‘a large block of Ezekielian material is employed by the author as a model for his own composition’ (2003:95). Cf. Moltmann (1996:313).

403 The ‘eschatological temple’ draws together many OT prophecies relating to a future ideal unfulfilled by the second temple structure. The initial promise of 2Sam 7:11 that ‘the Lord himself will establish a house for you’ is enhanced by later prophetic insights including Hag 2:3-9, Zec 2:10-13, 6:12-13, and Eze 40-48. Wright interprets Ezekiel’s vision as depicting the building of the eschatological temple (1996:619; 499ff).

404 That the bride metaphor refers to the church (Erickson, 1985:1132) is well known (e.g. Eph 5:29-32) but should not be so narrowly restricted. In its wider biblical usage it refers to ‘the people of God who are married to the Lord’ (Meadors, 1996:565). Beale and Carson trace the metaphor to redeemed Israel (Isa 62:5) (2007:1150).

the insights of temple theology, he and many others entirely miss the significance of the assertion ‘the Lord God Almighty and the Lamb are its temple’ (21:22). This is no mere designation of God as temple, but a recognition of the entire corporate relational structure intrinsic to the person of Jesus the Lamb.[405] Most all scholars recognise that Ezekiel’s description is more idealised than realistic,[406] yet there is no consensus on what this suggests. Temple theology provides a coherent explanation, and as Beale points out against literalist views, even if there *were* a future physical temple to be built, it would not fulfil the prophetic intent:

> To focus *only* upon a yet future physical temple as the fulfillment would be to ignore that Christ at his first coming began to fulfill this prophecy and that he will completely fulfill it in the eternal new creation; so even if there is to be a yet future physical temple built in Israel, it will only point to Christ and God as the temple in the eternal new creation. (2005:21).

A literal interpretation seems highly implausible. Physical temples, past or future, only *represent* the greater reality yet to come. If that greater reality is already found in Christ, then to go *back* to a physical temple, however ideal, would be to revert to the representation rather than progressing towards its fulfilled reality.

If the metaphorical interpretation is accepted, temple theology should nevertheless justify how such a detailed and elaborate architectural portrayal contributes to a symbolic representation of Christ and his followers. While there is no space for such a survey here, such studies have indeed shown numerous symbolic connections throughout Ezekiel’s description.[407] Additionally, building metaphors (foundations, cornerstone, ‘living stones’, walls, pillars, gates) are frequently appropriated from OT temple usage and applied to Christ, the apostles, the church, and the entire redeemed community ‘in Christ’.[408] Most importantly, it is the perfected structure, function, form, and relational dynamic of the temple which sheds light on the Jesus-as-temple designation; Ezekiel’s temple was not a static structure, but functional and purposeful. God’s glory had returned and the temple’s impact extended far beyond its borders (Eze 47:7ff).

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[405] ‘Jesus’ followers carry the same description of the ‘temple of God’ because they are corporately represented by the resurrected Lord of the new creation’ (Beale, 2004a:171).

[406] Note esp. ch 47. A river flows from the temple; its waters make salt-water fresh; swarms of living creatures live wherever the river flows; fruit trees grow on its banks bearing fruit every month with leaves that never fall and are used for healing. Strongly corresponding imagery is used in Rev 22:1-2 in the New Jerusalem.

[407] See the excellent analysis in Mathewson (2003:ch4) and Fletcher-Louis (2004).

[408] See for example D. Peterson (2004); Alexander and Gathercole eds. (2004).

B) A Progressive Temple – Continuity and Discontinuity

As Beale's quote above makes clear, the temple configuration in Jesus is not only functional, but *progressive*. Christ *began* to fulfil the true relational and teleological dimensions of the temple at his first coming by means of the gospel and the Spirit, incorporating first his disciples, multiplying those numbers at Pentecost, then expanding his 'new creation' gradually outward 'to the ends of the earth' – a process still ongoing. Christ will only *complete* that temple building process when those relational dimensions are both perfected and expanded to reach the size, scale, and holiness suggested by the description of the city-temple, the New Jerusalem (Rev 21:9-22:6), which in turn extends its influence outward to encompass the nations, the earth, and the heavens – in a new relationship. *How* this takes place is the subject of the following chapters.

Temple theology portrays Israel's temple structures as static intermediaries, representing the cosmic, recalling the archetypal, and pointing to the eschatological. In this regard, the Jesus-temple is a more logically and hermeneutically authentic successor to the archetypal Eden-temple, reflecting its original intent, purpose, commission, and relational dynamic, likewise with no physical building but with a clear relational structure. The intended *expansion* of the Eden-temple to encompass all the earth – curtailed by sin, death and separation – is restored in the Jesus-temple. Sin is defeated, death overcome in resurrection, God and man united, rule restored, and a new priesthood of believers recommissioned to resume and bring to completion the task assigned to Adam[409] but with a new emphasis on redeeming humanity (Mt 28:19). If the true and permanent temple has arrived in Christ, there can be no logical return to a symbolic temple *structure* – he already *is* the eschatological temple. But crucially this temple is far from complete – it is an expanding, advancing and developing temple whose ultimate fulfilment is only envisioned in the new heaven and new earth. As Wright asserts, 'Jesus would build the new Temple; his people would be the real new Jerusalem' (1996:338). This leads to the crucial eschatological question, what is the *process* by which the Jesus-temple of the present *becomes* the city-temple of the New Jerusalem in Rev 21-22?

A major implication of Christ inaugurating the new creation through his resurrection – a central principle held by Beale, Wright, Moltmann, and Polkinghorne – is that new

[409] 'The building of the temple that began in Genesis 2 but was abandoned will be commenced again and completed in Christ and his people' (Beale, 2004a:170).

creation is a *process*. Moltmann writes, '…the Creator impels his creation towards its goal: it is destined to become the temple of his indwelling glory' (2010:31). Yet the coming of the new heaven and new earth in Rev 21 appears to be an *event* on a cosmic scale. Although the end result may be the same, the means by which that end is achieved appear very different. How are these perspectives reconciled – continuity or discontinuity? The new creation (in its present form) is certainly incomplete, and easily misunderstood as merely marking the new identity of those who have been redeemed 'in Christ'.[410] 'Therefore if anyone is in Christ, he is a new creation' (2Cor 5:17). Yet if Christ's resurrection *is* the beginning of new creation, then as the 'firstfruits' of a new humanity (1Cor 15:20), those in Christ may be *already* resurrected spiritually but *not yet* resurrected bodily: continuity in sanctification, discontinuity in resurrection. Additionally, as Moltmann argues, a redeemed creation is required for a resurrected humanity, because humanity cannot be detached from nature – from the whole of life, the earth, the cosmos. 'There can be no eternal life for human beings without the change in the cosmic conditions for life (1996:260). But when and how does such a change occur? If new creation has been inaugurated with Christ's resurrection, its process of expansion currently remains invisibly hidden within the present creation. There would seem to be a clear *already* / *not yet* duality[411] in the new creation concept itself. The process of transition requires further exploration in relation to corporate eschatology and the resurrection, the topic of the following chapter.

Biblical Eschatology and the Meaning of 'the End'

In light of Polkinghorne and Moltmann's surprisingly strong assertions of an 'end of history' concurrent with corporate resurrection, and Wright's openness to a new temporality, the question of biblical evidence becomes paramount. Does the biblical data also indicate an 'end of history' or a transition from 'historical time' to 'eschatological time'? We will assess what the Bible means by its use of the phrase 'the end', as well as explore the broader context of that ending – or transition. In doing so one quickly encounters a minefield of hermeneutical and theological controversy. Our goal is to

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[410] The new creation expands through the Spirit 'indwelling' every believer who 'in Christ'.
[411] The '*already / not yet'* duality is a well-known hermeneutical mode of conceptualising much of NT theology Bock (2001:31); e.g. Ladd (1974). NT authors describe the end-times or latter-days as already *beginning* in the 1st C. yet pointing ahead to future fulfilment. Cf. Beale's discussion (1997:12ff) of new creation in these terms, contrasting its inauguration and consummation; also Moltmann (1985:123), Wright (2013b:1048-9).

determine whether ‘the end’ applies to the world – and history itself – or to something less absolute. In other words, to what extent does ‘the end’ reflect either discontinuity (whether partial or complete), or a transition with underlying continuity?

The End of the Age

Does ‘the end’ in biblical literature have a particular referent? This is the first critical question, for if not it leaves open to conjecture the question, ‘the end of *what*?’ Jesus frequently uses the phrase ‘the end’ (e.g. Mt 24:14) as in, ‘and then the end will come’, but the referent is always *the end of the age*.[412] This is either explicit (‘so it will be at the end of the age’ (Mt 13:40), or implicit in context. The whole of Mt 24 is Jesus’ response to the disciples’ question: ‘What will be the sign of your coming and of the end of the age?’ (Mt 24:3). The use of *aeon* (age) presumes, it would seem, another age to follow. At the very least it implies an underlying continuity even if the new age were deeply disjointed from the former, but could simply imply a transition to something new in the age to come. We have earlier concluded that the Jews expected ‘an age to come’ and that ‘eternal life’ can best be understood as ‘life in the age to come’ (Wright), so in this use of ‘the end’ there is a strong implied continuity.

In the OT, a similar use is seen frequently in Daniel in the phrase ‘the time of the end’ (8:17, 12:4). In this context, where Daniel is shown visions of sequential ‘times’ or ‘ages’, the phrase refers to the end times of a future age. The time of the end is not the end of time, but the end of an age. In other OT use ‘the end’ is prophetically connected to ‘the day of the Lord’, graphically illustrated in this passage from Ezekiel:

> Disaster! An unheard-of disaster is coming. The end has come! The end has come! Doom has come upon you – you who dwell in the land. The time has come, the day is near… I am about to pour out my wrath on you and spend my anger against you; … I will not look on you with pity or spare you… Then you will know that it is I the Lord who strikes the blow. The day is here! It has come! (Eze 7:5-10).

Here the end is associated with destruction and judgement, in this case on God’s people Israel. In the NT Paul uses similar language but in a positive light: ‘He will keep you strong to the end, so that you will be blameless on the day of our Lord Jesus Christ’ (1Cor 1:8). If Paul’s use is equivalent to the OT ‘day of the Lord’, it implies the day of the Lord is yet to come and will involve both judgement and redemption. If, as in Mt 24:3, the

[412] The most frequent use is in Matthew (9 times; 4 explicitly stating ‘end of the age’, the others implied).

coming of Christ is directly coterminous with end of the age, then all the biblical referents thus far refer to the same event – an end of an age and the inauguration of an age to come.

What then is the biblical case for discontinuity? While there are a few uses of 'the end' which have no clear referent – for example, 'the end of all things is near' (1Pet 4:7) or 'in the end it will be burned' (Heb 6:8) – the *context* for these is clearly God's judgement, juxtaposed alongside 'the coming age' (Heb 6:5) or Christ's coming (1Pet 4:13). The case for discontinuity is rather found in the *language* of destruction associated with the particular judgement to occur on 'the day of the Lord', at the end of the age, or with Christ's return. That language of destruction is not only directed towards sin and wickedness, but in both OT and NT occasionally refers to the whole earth or even the cosmos. This cosmic dimension of judgement, and the cataclysmic language associated with 'the day of the Lord' is sometimes interpreted as 'the end of everything' – not just the end of the age but the end of the world, and thus requires further consideration.

The Day of the Lord and the Language of Destruction

The 'Day of the Lord' is a prominent motif in the OT,[413] sometimes reformulated in the NT as 'the day of God' or 'the day of our Lord Jesus Christ' (Martens, 1996:146).[414] Events of great significance were commonly designated by the expression 'day'.[415] As Martens explains, The Day of the Lord involves 'divine intervention' and 'a God who comes' (1996:146). When God comes, the whole scene is dominated by his mighty power/divine wrath; Israel, the nations, or all humanity pales and quakes in God's presence. Secondly, this divine theophany signals both judgement (for the wicked) *and* salvation / vindication (for the righteous) (Beale and Carson, 2007:1059); thus the exhortation (in 2Pet 3:12) to 'look forward to the day of God and speed its coming.'[416] Salvation is not being rescued *out of* the situation but being preserved *through* it. Perseverance to the end is required. The same text compares this Day to Noah's flood

[413] It occurs 18 times in prophetic literature, with the related 'on that day' used over 200 times. (Martens, 1996:146). At the end of the OT (Mal 4:5-6) it is characterised as 'the great and dreadful day of the Lord'.
[414] See (2Pet 3:12, Rev 16:14) and (1Cor 1:8, 2Cor 1:14) respectively. Scholars see these as 'equivalent' expressions in the NT; however they do not necessarily point to only a single future event in the OT.
[415] Not a literal day. The term *Yom Yahweh* (day of the Lord) Witherington claims, is an event that goes on for some time; it parallels 'the year of retribution' (Isa 34:8) known also as 'the day of Judgement' (1992:149).
[416] But cf. Amos 5:18, 'Woe to you who long for the *Yom Yahweh*! …That day will be darkness, not light.' Witherington explains that the stress on judgement became increasingly strong, even more so in the intertestamental literature than in the OT. However, redemption is never absent. (1992:149).

(2Pet 3:5-7); not only were Noah and his family preserved *through* the flood, but all of creation was preserved through its destruction. Thirdly, the Day of the Lord is a day of great calamity, on a massive scale. Descriptions therefore rely on a generous use of metaphor, often mixed with direct description, difficult to untangle (Martens, 1996:147).

Metaphorical language of 'cosmic destruction' is closely associated with apocalyptic literature. As Witherington notes, the term *apocalyptic* is 'notoriously difficult to define' (1992:16), yet the significance of metaphor and symbolism in Jewish and early Christian apocalyptic writing cannot be overstated. Chipps (2014:27) concisely depicts three distinct manifestations of apocalyptic thought:

1) a genre of particular writings
2) apocalyptic language and imagery within non-apocalyptic genres
3) an apocalyptic worldview perspective which is not necessarily expressed in apocalyptic genre or imagery

While Jesus and Paul both appropriated elements characteristic of apocalyptic thought (Witherington, 1992:19), neither held to an apocalyptic worldview.[417] Rather, their 'cosmic destruction' language stemmed from a thoroughly developed OT linguistic convention of apocalyptic imagery rooted in prophetic tradition.[418] Wright asserts that the intensely metaphorical language of apocalyptic literature was a means of investing Israel's socio-political history with theological significance (1996:96). Metaphors from creation, flood, exodus, Sinai, and significant events in Israel's history were re-used and invested with new meaning (Wright, 1992:286; Patterson, 2000). 'Eclipses, earthquakes, meteorites and other natural phenomena were regarded as part of the way in which strange socio-political events announced themselves' (Wright, 1992:283).

The cataclysmic aspects of the 'Day of the Lord' dominate many OT descriptions (Isa 13:10, 34:4; Joel 2:10, 30-31). But when that same apocalyptic imagery continues into NT use (Mk 13:24-5; Act 2:19-21), the tension between an OT fulfilment in relation to Israel's destruction in AD 70 and a NT fulfilment at Christ's return becomes a matter of

[417] Key elements of apocalyptic worldview include cosmological dualism and an imminent end of the present world. In such a worldview these elements of thought would hold a central position dominating the perception of reality. Witherington (1992:16-17). For characteristics see also Hill (2002:60-64), Hultgren (2002:67-70). Chipps helpfully construes apocalyptic thought as 'a particular expression of eschatology' (2014:26).

[418] See Wright (1992:280-99). Hanson also regards 'apocalyptic eschatology' as 'a continuation of prophetic eschatology' (1962:29-30). D. Russell's study of OT Jewish apocalyptic asserts the anticipation of renewal. 'Contrary to popular opinion, the apocalyptists do not long to exchange the present world for some other... Indeed, the creation is the only stable, obedient, and faithful aspect of a world otherwise gone awry' (1996:211).

longstanding and unresolved debate. Adams is highly critical of Wright for his 'socio-political interpretation of biblical cosmic catastrophic language' (2010:111), and indeed this seems no longer defensible in a future, global context. But for Wright this is the intention of apocalyptic language, and it is entirely appropriate for language of destruction to announce the end of an age and the dawn of a new creation.[419] Many scholars join Wright in upholding a metaphorical interpretation (Caird, Fletcher-Louis, Middleton), while others (Adams, Keener) advance a literal view. Martens oversteps in asserting that 'Eventually the day of the Lord (God) came to mean the termination of the world' (1996:147), but that has most certainly become one prominent interpretation.[420] Nevertheless, Wright adamantly rejects the 'literalist' interpretation: 'there is virtually no evidence that Jews were expecting the end of the space-time universe' (1992:333).[421]

In moving into a broader NT context, the conventional application of apocalyptic imagery continues to indicate 'the end of the age' without necessarily implying 'the end of the world':

> In some prophetic texts "the day of the Lord" refers to an event so cataclysmic that it ends an age of the world (e.g., Joel 2:28-3:21; Zech 14:1-21). This usage passed over into the NT, where the Day of the Lord refers to God's judging action when Christ returns at the end of the age (Ryken, 1998:196).

Middleton sees the hyperbolic language of destruction as vividly conveying a coming judgement 'so radical as to destabilize the present order' (2014:121). In the NT 'the motif of the sudden and unexpected end' (Witherington, 1992:174) becomes a repeated feature of Jesus' teaching, but one which Jesus himself now associates with 'the coming of the Son of Man.' Crucially then, in transferring the 'Day of the Lord' to a NT eschatological framework, it becomes concurrent with Christ's return (Witherington, 1992:178) in bringing about 'the end of the age'.

Christ's return (or *parousia*) is the defining event signifying 'the end of the age' and 'the beginning of the age to come'. Bauckham and Hart describe it as 'the focal image in

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[419] See Wright's spectrum of interpretational options (1996:208) in which he argues that 'end-of-the world language' was the only adequate metaphor to announce the climax of *Israel's* history.

[420] Despite rejecting it himself, Wright notes that the literalist reading has had 'a profound effect' on NT study in the modern era (1992:285). Kirsch (2006:ch6) provides a modern history of 'end of the world' thought.

[421] Fletcher-Louis concurs, arguing the cosmic imagery refers to 'the imminent end to the social, religious and economic structure of Israel's covenant relationship with God with the attendant destruction of the temple' (1997:146). See also Wright (1996:207). Wright's use of 'space-time universe' is rather unfortunate. While he makes the point to contradict modern interpretations, the Jews of course had no such concept of a space-time universe.

New Testament eschatology. All else depends on it' (1999:117). It became enshrined in the Nicene creed as a core doctrine of the Christian faith: 'He will come again in glory to judge the living and the dead, and his kingdom will have no end.' Christ's *parousia* thus coincides with 'the Day of the Lord', together forming the climax of eschatological anticipation of both judgement and redemption, as well as signalling the resurrection (1Th 4:14-16). But while the 'Day of the Lord' is short-lived, the *parousia* continues 'without end' in concert with his kingdom reign.

Israel's End of the Age - Realised

What then did Jesus intend in his apparent teaching of apocalyptic destruction and the end of the world (Mk 13 / Lk17 / Mt 24)?[422] Within this complex block of teaching, Jesus:

a) prophesies the destruction of the Temple (Mk 13:2)
b) incorporates prophetic language of cosmic disruption associated with the Day of the Lord: 'the sun will be darkened, and the moon will not give its light; the stars will fall from the sky, and the heavenly bodies will be shaken' (Mk 13:24-5; cf. Isa 13:10)
c) proclaims the Son of Man will come with power and glory (Mk 13:26; cf. Dan 7:13-14)
d) concludes that 'heaven and earth will pass away' (Mk 13:31; cf. Isa 51:6)
e) claims that all these things will happen in this generation (Mk 13:30)

Wright proposes a distinctive hypothesis which contradicts both the long-established tradition of interpreting much of this teaching in terms of Jesus' future 'second coming', and the more recent 'scholarly tradition' (following Weiss and Schweitzer) asserting that Jesus predicted the *imminent* end of the world, but was mistaken (1996:341).[423] The key issue is whether Jesus' teaching implied a near-future Jewish-eschatological fulfilment focussed on the destruction of Jerusalem and temple, or a far-future fulfilment (extending his role as Jewish Messiah to Saviour of the world), inaugurating a new Christian eschatological vision. Wright insists on the former, developing a socio-political interpretation grounded securely in the first century historical context.

This is not the place to examine the extensive details of Wright's interpretation, but at the risk of oversimplification, his key is to recognise that Jesus saw himself, his role, and his

[422] Mark's so-called 'little apocalypse' and Matthew's 'Olivet Discourse' have received an enormous amount of scholarly critique in modern theology, with numerous competing theories. See G.R. Beaseley-Murray (1993).
[423] Wright also rejects apocalyptic interpretations of moral dualism or Platonic dualism in which the world was unredeemable and Jesus was inaugurating a new spiritual existence (1992:285, 297).

message as the completion of a powerful historical and cultural meta-narrative centred on God's covenant relationship with Israel.[424] In this narrative, the Jews were expecting God to keep his covenant promises, vindicate Israel over her enemies, bring them truly out of political exile (under Gentile rule) and into a national restoration. Many believed this would be accomplished through a promised Messiah. Most of all, 'they were looking for a restored temple, and for their god to come and dwell in it' (Wright, 1992:321). The destruction of the first temple had been 'a catastrophe at every level, theological as well as political' (Wright, 1996:205). The Shekinah glory had departed, the Davidic monarchy cut off. But the temple was designed to represent 'the centre not only of the physical world, but also of the entire cosmos.' As YHWH's dwelling-place, 'it was the place where heaven and earth met' (1996:205). Wright argues that the Jews were indeed expecting a great transformative event vindicating Israel, and that this event would have cosmic significance – not as the end of the world, but as 'the end of the present *world order*' (Wright, 1996:95 his italics), with Israel exalted over all her enemies.

Jesus enters the picture as this supposed long-awaited Messiah, hailed as a king in the Davidic line. Yet instead of proclaiming a message of triumph, Jesus – in typical prophetic tradition – sounds a dire warning and prophesies the *destruction* of the temple! As Wright explains, Jesus agreed that 'Israel's history [was] drawing to its climax' (Wright, 1992:97) but warned that her present course would end in political and national disaster. 'Jesus staked his reputation on his prediction of the Temple's fall within a generation. If and when it fell, he would be vindicated' (Wright, 1996:362). In doing so, Jesus draws on the complex metaphor-system lifted from Israel's prophetic history and 'Day of the Lord' symbolism to explain the coming destruction *within their generation.* This was fulfilled in one sense by Jesus' own death,[425] but ultimately by the temple's destruction in AD 70, a disaster of cosmic significance for Israel, akin to the end of their world. Events which might seem parochial, ethnic and of little consequence to the outside world are described by Jesus, just as they had been by Israel's prophets of the past, in apocalyptic language encompassing heaven and earth.[426]

[424] See (1996:203) for Wright's fuller summary of this meta-narrative.
[425] Fletcher-Louis particularly interprets Jesus' death as the fulfilment of Mk 13:31 (1997:164-5).
[426] In a wholly subversive way, Jesus indeed *did* inaugurate a new age – and with it salvation, a kingdom, and a new temple – through his death and resurrection. This aspect will be explored subsequently.

Humanity's End of the Age - Future

If Wright's hypothesis is correct, we see both continuity and discontinuity *centred on Israel*, clothed in Israel's own prophetic traditions and metaphor-laden apocalyptic language, grounded in its covenant history: discontinuity in the destruction of Jerusalem and the temple, the devastation and dispersal of Israel and the ending of its nationalistic aspirations – but complete continuity of the physical world. However, many scholars have been critical of Wright's approach as an 'over-realised eschatology',[427] not sufficiently taking into account the appropriation of the same apocalyptic imagery of cosmic conflagration by the NT authors with a worldwide and *future* outlook.[428] As scholars like Adams point out (2007:3), this is no longer centred on Israel, so there is no longer a hermeneutical basis for grounding a metaphorical interpretation in Israel's history. Applying this language to a new worldwide context, as early Christianity did, where temple becomes 'Jesus and his people', Torah becomes 'Jesus-belief' and 'Land is transposed into World' (Wright, 1992:451) poses renewed questions about the nature of 'the end'.

In response to such criticism, Wright asserts in the Pauline corpus a much clearer 'already and not yet' eschatology.[429] In Christ, the new age was 'well and truly *inaugurated*, [but] not yet *consummated.* (2013:1047). The glorious 'age to come' expected by Israel began with Christ's resurrection and will be consummated in the resurrection of his people. 'Resurrection and the renewal of creation go hand in hand… the Jews who believed in resurrection did so as one part of a larger belief in the renewal of the whole created order' (1992:332). Humanity is already experiencing the *inaugurated* age to come, but not yet the *consummated* 'age to come' of resurrection and eternal life. Yet in these overlapping ages, Wright too strongly separates the aspect of judgement (in relation to Israel's past) from the aspect of salvation and renewal (in relation to the whole world's future), without adequately addressing the extent of real destruction entailed in that future transition. Adams (2007) is perhaps the most ardent contemporary advocate of a 'literal' view of future cosmic conflagration and destruction. Even if the language is metaphorical,

[427] Wright admits this and attempts to dispel that critique (2013:1047). See esp. Newman (1999), Allison (1999).
[428] In that sense, references to Christ's 'coming' can therefore no longer refer to his ascension as Wright proposes for Mk 13:26. This future outlook is particularly notable in Revelation if, as most scholars believe, it was written well after the events of AD 66-70.
[429] See Wright (2013: 1047-9, 1069, 1112).

'metaphors have teeth', as Wright himself points out (1996:321). The devastation of Israel in AD 66-70 was very real and comprehensive; what might that portend in a global context? The key NT passages asserting a far-future judgement and cataclysmic destruction at Christ's coming at the 'end of the age' must be taken into account.

Adams argues that 'New Testament cosmic catastrophe language cannot be regarded as symbolism for socio-political change; writers who use this language have in view a 'real' catastrophe on a universal scale' (2007:3). Adams here represents a well-established stream of Christian tradition with a predominantly 'far-future' interpretation of Jesus' apocalyptic and kingdom pronouncements;[430] this has gained renewed scholarly support through modern dispensationalism.[431] Of the many NT references to future judgement using 'language of destruction', we need only assess here the most pronounced to determine whether these truly portray an 'end of the world' scenario. Notably, the two most important texts, 2 Peter and Revelation, both have likely dates post-AD 70.[432]

A) *The Challenge of 2Pet 3:7,10*

The single verse of 2Pet 3:10 is commonly regarded as a keystone text which upholds a great deal of interpretational adjudication on the reading of other texts, however misguided this may be; but its broader context is enlightening. 2Pet 3:4-10 is regarded by Bauckham (1983:296) as a chiastic structure in which vv.8-10 respond to v.4. Here we find a direct correlation between the future 'coming' of Christ (4) and the 'day of the Lord' judgement in cosmic terms (10), along with an explanation for the delay (9) and portrayal of its imminence (10). Verses 10-13 state:

> But the day of the Lord will come like a thief. The heavens will disappear with a roar; the elements will be destroyed by fire, and the earth and everything in it will be laid bare (10). …That day will bring about the destruction of the heavens by fire, and the elements will melt in the heat (12). But in keeping with his promise, we are looking forward to a new heaven and a new earth, the home of righteousness (13).

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[430] Wright applies this futurist view generally to mainline Christianity, specifically its pietist and fundamentalist branches. Bock specifies the 'already/not yet' tradition rooted in the works of Kümmel, Fuller, and Jeremias, as well as the 'inaugurated eschatology' of Ladd. He notes, 'It is probably the most prominent view currently in New Testament circles at large, both conservative and critical' (2001:32). See also Ladd (1974:ch1). A major dilemma for the future view is the interpretation of 'soon', 'near', and 'this generation' (Mk 13:29-30).

[431] See e.g. Blaising & Bock eds. (1992), but esp. Chipps (2014) for a careful development of earthly continuity toward new creation in light of dispensationalist concerns.

[432] For views on dating of Revelation, see esp. Beale (1999). For 2 Peter, Witherington (2007:18, 260ff).

In broader context the critical interpretational clue lies in the centre of the chiasm. The author claims that the same God responsible for the *coming* destruction is the God whose mighty word destroyed the world of *that* time (5). Just as scoffers mocked Noah, so scoffers of the present mock the current assertion of coming judgement (3-4).

The word 'destruction' does not, in this parallel, indicate an annihilation of the earth, but a complete reordering. The righteous (Noah and family) were saved *through* the flood into a purged 'new creation', the wicked destroyed (cf. v.13). Bauckham notes that the 'ancient world' (2:5, 3:6), is equivalent to 'the world of ungodly people'. 'The author's real concern throughout this discussion is not with cosmology but with judgment' (1983:299). Destruction by water in the past is contrasted with destruction by fire to come, and each corresponds to the end of an age. 'Consuming fire' as a metaphor for divine judgement is frequent in the OT, used repeatedly by the prophets.[433] This is not to say that fire is *only* metaphorical (nor the flood), but the function of fire in the OT was always 'to consume the wicked, not destroy the world' (Bauckham, 1983:300).[434] The prophetic hyperbole is evident in Zep 1:18: 'In the fire of his jealousy the whole world will be consumed, for he will make a sudden end of all who live in the earth'. The passage concludes: 'seek righteousness, seek humility, perhaps you will be sheltered on the day of the Lord's anger' (Zep 2:3). Cosmic conflagration is God's appropriate execution of divine judgement on a sinful humanity.

The author is clearly steeped in OT language and imagery and invokes it fully in a future context no longer centred on Israel, but on the world.[435] The apocalyptic language associated with Christ's first coming (including Christ's predictions of Israel's 'end') is the most appropriate language to associate with his second coming and 'the day of the Lord'. Here the reference to the heavens 'disappearing' (2Pet 3:10) *may* reflect the OT 'heaven and earth' but may also indicate the physical heavens (i.e. the sky).[436] Moo and White suggest the 'burning away of the earthly 'heavens' suggests that the symbolic separation between God and his creation is being done away with (2013:133). Bauckham

[433] Isa 30:30, 66:15-16; Eze 38:22; Amos 7:4; Zep 1:18; Mal 3:19. Sodom and Gomorrah was seen as judgement. D. Moo interprets this metaphorically on the basis of its OT prophetic use (2006:465).
[434] Some suggest a 'purging' or 'testing' aspect of fire, e.g. Heide (1997:53-4), but similarly not annihilation.
[435] Witherington asserts that 2 Peter 'begins the use of Jewish apocalyptic material' from 3:4 (2007:371).
[436] Cf. Heb 1:10-11 which likewise indicates the heavens and earth 'perishing' but is overtly lifting this from OT prophetic language (Isa 51:6). The language 'contrasts the transience and destructibility of the world and the enduring quality of God' (Porter, 1997:1240).

sees the consuming fire 'affecting the physical world *and* as effecting judgement' (1990:90 my italics) to which Witherington concurs. In the second phrase, the term *stoicheia* is disputed, meaning either 'elements' (i.e. earth, air, fire, water), 'heavenly bodies' (i.e. sun, moon and stars) (Witherington, 2007:379) or 'the world order' (Heide, 1997:53). The third phrase 'the earth… laid bare' is also unclear in the Greek. Bauckham arrives at the most likely meaning of 'will be found' (1983:316) perhaps in the sense of revealed, uncovered and exposed, as in Heb 4:13.[437]

All of this conveys a sense of the *comprehensiveness* of God's judgement – skies, elements, earth, are all affected. Yet to conclude a complete and literal annihilation of the cosmos, earth, and elements is unfounded.[438] The judgements of Noah's day, of Sodom and Gomorrah, and of Jerusalem and temple were likewise cataclysmic, devastating and comprehensive, yet in each case the righteous were saved and the earth (or land) remained. This is the only justification for the admonition 'look forward to the day of God and speed its coming' (2Pet 3:12). The notion of a fiery conflagration ending the world is found only in 2 Peter in the NT (Bauckham 1983:300) and should certainly not serve as a control belief to interpret other earlier 'judgement' texts. Although it *can* be read literally as a 'cosmic meltdown' – and such a view was well-known in the Stoic philosophy and Zoroastrianism of the time (Bauckham, Wright, Adams) – it should rather be interpreted in light of the OT prophetic tradition of apocalyptic judgement metaphors familiar to the original author and readers.[439] This is the fire of divine judgement, and the focus is human wickedness. No doubt physical destruction is one aspect of that judgement, but Revelation offers a far more detailed picture of the extent and nature of that future cataclysm.

B) The Challenge of Revelation

Revelation stands alone in the biblical corpus as a unique literary work of apocalyptic vision – one of extraordinary value to Christian eschatology.[440] But our task here is very

[437] Heb 4:13: 'Nothing in all creation is hidden from God's sight. Everything is uncovered and laid bare before the eyes of him to whom we must give account.' Adams agrees with this interpretation (2010:114).
[438] Both Bauckham (1983:301-2) and Witherington (207:380) reject this conclusion after detailed exegesis.
[439] Even Wright regards this text as pointing to a future fulfilment, seeing fire as divine judgement, but focussing mainly on drawing out aspects of continuity by appealing to the promise of global renewal (2003:462-3).
[440] The vast number of commentaries written on Revelation involve contrasting interpretational approaches; among the most useful exegetically are Thomas (1992; 1995), Bauckham (1993a; 1993b), Beale (1999).

specific – to highlight the most destructive aspects of its vision, and assess whether even the most literal interpretation results in a conclusion of total discontinuity. Revelation is notable for its sequential (or possibly recapitulative) unfolding of a series of judgements in sets of sevens,[441] each set increasing in intensity and scope: seven seals, seven trumpets, and seven bowls. The climax of the vision is: a) the coming of Christ in power and glory with the armies of heaven (19:11-14) to battle and defeat the powers of the world, depicted by the beast (antichrist), the 'kings of the earth' and their armies (19:19-21); and b) the establishment of his kingdom on earth, as announced by the seventh trumpet (11:15). Aspects of worldwide disorder first enter the vision with the opening of the seven seals (Rev 6), but the 6th seal stands alone in its cosmic imagery.[442] Its description is a direct parallel to Jesus' words in Mk 13:24,[443] themselves taken from Isa 13:10,13 and 34:4: a great earthquake, sun turned black, moon turned blood red, stars falling to earth, sky 'receded like a scroll', mountains and islands 'removed from their places' (12-14).

The vision gives every indication of worldwide scope, no longer arising from Israel's socio-political situation, but the idea that the 6th seal denotes the literal dissolution of heaven and earth is exceedingly difficult to reconcile with the remainder of the vision. Immediately *following* the 6th seal, the earth's inhabitants cry out in fear for what is *about to* happen (6:16-17): 'Hide us…for the great day of their wrath has come, and who can stand?' Crucially, the seals are external to the scroll, thus Bauckham (and those holding a sequential view) concludes that the seals do not reveal the contents of the scroll, but are preliminary to its reading (1993a:248-50, 1993b:80).[444] The seventh seal (8:1) induces 'silence in heaven' before the trumpet and bowl judgements reveal the contents of the scroll. Trumpet judgements strike the earth in proportions of one-third, affecting land, sea, creatures, freshwater, sun, moon; mankind endures five months of plagues (9:5) until one-third are killed (9:15-18). Devastating beyond measure to be sure, but not an absolute end. The 'bowls filled with the wrath of God' are then poured out from the heavenly temple (15:7) with even greater intensity but directed largely at the antichrist

[441] This is an important distinction. See esp. Koester (2001), Thomas (1993; 1995:3-5). Whether the judgements are *repeated* or *sequential* cycles or overlapping with elements of both is disputed.
[442] Revelation is heavily dependent on OT language and imagery: Beale and Carson (2007), Moyise (1995); each of the seals are rooted in OT prophecy.
[443] In like manner, Thomas (1992:420-1) correlates the first four seals of ch.6 with the 'beginning of birth pangs' (Mk 13:5-8) in Jesus' teaching.
[444] Beale disputes the certainty of this conclusion (1999:344-8), while many simply miss the significance.

and his kingdom. The 7th bowl concludes the sequence with a tremendous earthquake and hailstones (16:17-21), whilst the way is prepared for the final battle at Armageddon (16:16). Christ comes in glory (19:11-16), the battle is fought, and the Lord is victorious (19:19-21). There is no point beyond 6:12-14 in which a total dissolution might be in view.

The only way to interpret the cosmic events of 6:12-14 as the 'end of the world' is to collapse the entire vision into a series of parallel repeating cycles which all conclude at that point. Many interpreters do just that (Wright, 2011:63; Keener, 2000:200). Wright however, does not view cosmic dissolution literally (2011:67). Not only does this recapitulation disregard John's narrative structure (e.g. 'after this I saw'), but it renders the climactic battle between Christ and the antichrist meaningless. This cannot take place *after* the 'end of the world', yet Christ's triumph and establishment of his kingdom (17:14, 19:15) have no significance if just *before* the dissolution of the world. One could argue that his coming and the great battle are metaphorical, but we are assessing a literal hermeneutic approach. Finally, a literal approach might view the cosmic disturbances as the *perceptions* of earth's inhabitants. The sun *appears* to darken, the moon *appears* red as blood. A minor comet or asteroid impact could easily account for all the phenomena of 6:12-14, as some scholars have suggested,[445] and nations could deteriorate into chaos. In any case, Revelation most plausibly depicts an 'end of the age' with devastating judgements, not an 'end of the world'.

Summary

Biblically we find that 'the end' corresponds solely to the 'end of the *age*'. But which age is in view? Wright's socio-political interpretation of apocalyptic imagery suitably interprets the 'end of the age' for Israel as the destruction of the temple in AD70, and Christ's resurrection inaugurates the new age. Although the same language and imagery is re-used in the NT, the context and scope become worldwide, and consequently the interpretation must be adapted. While Wright continues to take a metaphorical view of judgement, emphasising continuity in transformation and renewal, Adams asserts a far more literal interpretation, emphasising cosmic dissolution. Bauckham offers the most plausible solution: while judgement is directed primarily at the wicked, real physical

[445] Physicist Paul Davies paints precisely that frightening hypothetical picture based on the Swift-Tuttle comet's predicted intersection with earth's orbit in 2126. (1994:1-2).

devastation is also in view. Just as Jerusalem and the temple were devastated in the judgement of AD 70, the devastation of the world at the end of the age will be severe – but cosmic dissolution goes too far. We see the end of *the present world order*, not the end of the world itself. 2Pet 3:10 must be interpreted in light of Revelation and other NT texts regarding 'the Day of the Lord', not the other way around. Finally, discontinuity is evident in the *event* of Christ's *parousia*, bringing the present age to an end and inaugurating the 'age to come'. Ironically discontinuity seems strongest not in the destruction, but in the radical in-breaking of the glorified Christ into the earthly world commensurate with his kingdom and humanity's resurrection. Yet despite theological conjecture regarding the 'end of history' and 'end of time', nothing biblically thus far warrants that conclusion. Rather, judgement, *parousia*, and resurrection are all temporal events; there is no reason to insist that these could not take place *within* history, and *within* a framework of continuity, however momentous the transition.

Conclusion: Reconciling Cosmic Eschatologies

In relating scientific cosmology (chapter 6) to biblical cosmology and temple theology, three primary issues should be highlighted: 1) cosmological scale; 2) teleological significance; and 3) theological continuity.

1) This study makes clear that neither cosmic geography nor temple theology can be seen as involving the universe (as understood scientifically). The phrase 'the heavens and the earth' implies the cosmological relationship between God (the heaven above), humanity, and the earth (the heavens below, and all non-human creation). The scale is miniscule in relation to the scale of the universe – and yet all-encompassing for the biblical authors and the entire ANE world. The attempt to overlay biblical cosmology and scientific cosmology is therefore misconstrued and certain to cause theological confusion. The universe is not 'a special stage for human history' as Gingerich suggests (1998:55); 'heaven and earth' is. The suggestion that a modern-day biblical account might read, 'in the beginning was the big-bang' is to misunderstand the nature of biblical cosmology and its teleological goal. It is not the story of the whole created universe, but the human-centred story of a relational and purposeful creation.

This should not devalue whatsoever the importance of an *ex nihilo* creation of a time-space universe, nor the critical science-theology dialogue surrounding it, but simply

recognises this is clearly *not* what the creation account nor biblical cosmology is about. The consistent failure to recognise two different cosmologies and two different eschatologies results in a dichotomous search for consonance between scientific *cosmology* and biblical *eschatology*.[446] Russell is acutely aware of the problem of 'basing eschatology so thoroughly on scientific cosmology that eschatology is reduced to cosmology' (2008b:567). Many in his survey therefore conclude that the two are irreconcilable, or that eschatology is irrelevant to cosmology, a situation Russo aptly defines as a 'cosmology-eschatology dissonance' (2019:27).[447] Positive attempts at reconciliation rely on conjecture of a divine 'transformation of the universe' as Polkinghorne's proposal will show (chapter 8).[448] Is there then no possibility of dialogue or integration? Yes – but precisely in the narrow space where scientific cosmology *does* overlap with biblical cosmology, the moment the universe 'becomes aware of itself' – and perhaps of God – through the arrival of human beings 13.7 billion years into the story told by scientific cosmology.

2) The teleological significance of biblical cosmology is likewise unrelated to any far distant eschatological assessments of the physical universe. As temple theology demonstrates, meaning and significance are entirely enveloped within the context of the God-humanity-creation relationship, the cosmic temple. New creation refers to the teleological endpoint at which the entire 'heaven and earth' becomes that ideal cosmic temple, the new heaven and new earth – not the universe beyond. But by implication it refers back to the whole historical trajectory leading from creation to new creation. Colin Russell writes, 'Human *and* Earth history are unidirectional, the fulfilment of a divine plan that even the sin of humanity cannot ultimately frustrate' (1994:148). Again, this does not deny the theological significance of scientific eschatology's prognostications, but they only pertain to biblical eschatology within a limited and human timescale of unknown duration. There is no basis for interpreting biblical expressions such as 'eternal' or 'forever' in terms of the timescale of the universe. Eternal life in the age to come does not unquestionably imply an unchanging existence over billions, millions, or

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[446] Kathyrn Tanner summarises, 'If the scientists are right, the world for which Christians hold out hope ultimately has no future. Hope for an everlasting and consummate fulfilment of this world is futile: destruction is our world's end' (2000:222). Tanner highlights the conflict faced by so many with a view to science in eschatological dialogue with theology's idyllic future.

[447] Russell surveys a variety of responses to this problem within the science-theology dialogue (2008b:566ff). Ferreira (2003:306) also points out that 'cosmological and biblical eschatology clash quite starkly'.

[448] See also Russell (2008b:571-5). The Polkinghorne-Russell view of transition is critiqued in chapter 9.

even thousands of years. God's plan for creation *beyond* the new heaven and new earth is entirely unknown.[449] Yet there is a vital need for meaningful eschatological dialogue *within* the current human-scale trajectory of life, because that very life is under theat.

3) Moltmann posits a 'tripartite' conception of creation: *creatio originalis – creatio continua – creatio nova* (1985:208). Continuous creation lies at the heart of temple theology, bridging and unifying the narrative from initial creation in Gen 1-2 to eschatological new creation in Rev 21-22. We have seen how the evolutionary unfolding of the universe – interpreted by Polkinghorne as 'continuous creation' – has likewise become the dominant interpretation of scientific cosmology, from initial big-bang to eschatological demise. Both cosmologies indicate an overall context of continuity, where discontinuity is best seen as transition or transformation. Temple theology highlights changes of form (discontinuities) through various configurations of visible temples on earth, but all within the context of a cosmic temple structure.[450] Neither Wright nor Moltmann provide a thorough exposition of temple theology,[451] yet both affirm its fundamental continuity.[452] The question yet to be determined is how dramatic will be the transformation from the Jesus-temple to the city-temple of the New Jerusalem? But we may now presume – from both scientific and biblical cosmology – an underlying continuity as the critical-realist context for any eschatological proposition.

[449] The new heaven and new earth is almost without exception interpreted as a final state of existence – thus 'static'. Yet if it exists in time as our study has shown, this implies continued change, growth, development – an idea to be developed in chapter 8.
[450] Beale proposes an unbroken line of the temple motif through Israel's history, including in post-Edenic history through the building of small sanctuaries. (2004a:97).
[451] Wright however offers significant insights on temple Christology (2006:101-4; 2011:187-8).
[452] Moltmann does so particularly in terms of the continuous 'tabernacling' presence of God's *Shekinah* glory (2010), and Wright in terms of repeated restatements of the Adamic commission (1991:21ff).

Chapter 8
Issues of Continuity in Corporate Eschatology

'New Creation is in mind wherever the concept of resurrection occurs'
G.K. Beale

Introduction

Corporate eschatology forms the intersection between individual and cosmic eschatologies, and may be helpfully understood in two distinct yet overlapping strands – one setting humanity's resurrection within the context of the cosmic vision of the new heaven and new earth, the other emphasising the transitional process of humanity's and earth's future, from creation to new creation. The former stresses the aspect of 'event', presenting a strong appearance of discontinuity; the latter stresses the 'process' of transition from the present age to the age to come, in light of temple theology's view of growth, expansion and redemption. The question is whether these are reconcilable, and if so, how is the 'event' of the NHNE 'coming down out of heaven' (Rev 21:5) to be interpreted in light of the underlying continuity of temple theology and a process account of new creation?

At the start of it all stands the event of Christ's resurrection – a hermeneutical challenge for the science-theology discourse – yet regarded by Wright, Moltmann and Polkinghorne as the very inauguration of the new creation, a glimpse of humanity's future 'breaking in' to the present. In Moltmann's unique manner of interlacing times, Christ's resurrection is 'the beginning of the end of history in the midst of history' (1974:166-7). For both Polkinghorne and Moltmann, it provides the model for cosmic renewal. Resurrection thus becomes the key to interpreting the new creation but must be assessed as both a past event (in Christ), a future event (for corporate humanity) and potentially a cosmic event signifying the fulfilment of a transition from creation to new creation.

The Centrality of Christ's Resurrection

In Paul's words, 'if Christ has not been raised, our preaching is useless and so is your faith' (1Cor 15:14). The resurrection of Jesus, as the culmination of his earthly ministry and death on the cross, is the heart of Christian faith and theology, defining Christianity's unique worldview and providing its teleological and eschatological orientation. Its theological centrality and significance cannot be overstated, nor can its radical

implications for the future of humanity. Ladd claims, 'The entire New Testament was written from the perspective of the resurrection. Indeed, the resurrection may be called the major premise of the early Christian faith' (1975:42). Moltmann concurs: 'God's raising of Christ was the foundation for faith in Christ, and thus the foundation of the church of Christ as well… the Christian faith stands or falls with Christ's resurrection' (1990:213; cf.1967:165).[453]

The significance of the resurrection is not in doubt, though as John Barton's survey attests, precisely *why* it is so significant invokes an array of diverse responses (1994:114). Polkinghorne, Wright and Moltmann however are agreed in a three-tiered response: vindication, assurance, and inauguration. Firstly, resurrection is the vindication of Jesus' message and his claims of identity, transforming the cross from a symbol of death and terror to one of atoning sacrifice, perfect love, and victory. 'Christian faith essentially reads the history of Jesus back to front: his cross is understood in the light of his resurrection…' (Moltmann, 1974:166). Ladd claims, 'His resurrection is the event that validates all that came before' (1993:354). For Polkinghorne, 'The resurrection is not only the vindication of Jesus, it is also the vindication of God: that he did not abandon the one man who wholly trusted himself to him' (1994a:121). The cross is also seen as the *beginning* of a divine response to the problem of sin, death and evil, not fully resolved until the advent of the new heaven and earth.

Secondly, the resurrection assured the future hope for humanity, both individually and corporately, only hinted at in the OT. It justified the 1st century Jewish expectation of a general resurrection at the end of the age, and an eternal life in the age to come – not a shadowy existence in *sheol*, but 'a newly embodied life, a transformed physicality' (Wright, 2003:682). Polkinghorne adds, 'Its singularity is its timing, not its nature, for it is a historical anticipation of the eschatological destiny of the whole of humankind (1994a:121). This anticipation provided for Moltmann the justification for developing an eschatological theology grounded in future hope.[454]

Thirdly and most importantly Wright asserts, 'It explains the early Christian conviction that the long-awaited new age had been inaugurated' (2003:682). Jesus' resurrection – as

[453] Polkinghorne likewise asserts that had Christ not been raised, his life would now be forgotten (1994:120-1).
[454] See Moltmann (1967; 1968c; 1969; 1971). Much recent scholarship has since followed this eschatological approach.

the firstfruits of new creation – signified that the *process* of new creation had begun. Polkinghorne explains, 'The resurrection is the beginning of God's great act of redemptive transformation, the seed from which the new creation begins to grow' (1994a:121-2).[455] Wright adds, 'the cosmos will be renewed precisely through the agency of those who are thus raised from the dead to share the 'glory', that is, the kingly rule, of the Messiah' (2003:258). This idea of human agency merits further exploration, but from these three key assertions we may structure an approach relating first to Christ, then to humanity, and finally to the notion of a resurrected earth or cosmos, as a possible means of interpreting the new heaven and new earth.

Jesus' Resurrection in Science-Theology Dialogue

Can science have anything to say regarding Jesus' resurrection? On the surface, it would seem not. As Welker observed at a major science-theology consultation[456] on eschatology, 'There is perhaps no topic that seems less suited for the dialogue between theology and the so-called exact sciences than the topic of the resurrection' (2000b:279). Yet two years later this was precisely the task set – to explore the Christian concept of resurrection in light of the views of contemporary science (Peters, Russell and Welker eds., 2002). Resurrection is an unparalleled event contravening natural laws and processes that must seemingly be accepted by faith alone. This has proven no less problematic for modern theology than for science, as neither discipline wished to be accused of an *a priori* acceptance of an apparent non-realist interpretation.[457] But as outlined earlier, in science-theology dialogue the search for truth supersedes the dismissal of an otherwise objective, historical event with significant circumstantial and testimonial evidence. As Russell aptly reminds, 'if it is impossible, it cannot be true. But if it is true, it cannot be impossible' (2002a:16).

Until quite recently then, resurrection was an 'off-limits' topic for both science and academic theology, excepting (in theology's case) re-interpretations of the event in

[455] The resurrection is so central to Polkinghorne's thought that nearly all his works refer to it, in many cases with substantial treatment: (1983:ch 8; 1995f:ch 7; 1998e:ch 1; 2002b:ch 6,7; 2005a:chs 4,10; 2007:ch 2; 2008:ch 6,7), Polkinghorne & Welker (2001:ch 3,7).
[456] The three-year consultation culminated in publication: (Polkinghorne and Welker eds., 2000).
[457] Welker points out that resurrection runs counter to the epistemological rationality and standards of experience and experimental reproducibility prized by the natural sciences (2000b:279). He further notes, 'A theology concerned about its academic reputation avoided this topic or at best gave it a niche under the cloak of existentialist and super-naturalist figures of thought' (2002:35).

subjective terms, or re-definitions of the traditional meaning of 'resurrection'. These have had a profound influence on the modern discourse and so must be taken into account here, although primarily to distinguish such interpretations from the traditional, biblical understanding to be followed in this chapter and widely accepted within the science-theology discourse. This helps explain why such a central Christian doctrine with vital eschatological implications was so widely ignored for so long in the discourse, prompting Russell to remark that 'little attention has been given to the resurrection of Jesus and its eschatological implications in light of science' (Russell, 2002:10).[458]

Priority of a Bodily, Historical Resurrection

In this section we take as our initial starting point a particular interpretation of the resurrection of Jesus – that it was a real, objective, historical event and a bodily transformation – implying that the tomb was found empty, the witnesses really did see, eat with, and speak to, an authentic, risen Jesus. The remarkable diversity of views on resurrection in contemporary NT scholarship is divisible into two quite distinct categories: 'objective' and 'subjective' interpretations. Modern scholarship, for the reasons above, has favoured the subjective view:[459]

> In the subjective interpretation, the "Resurrection of Jesus" actually refers to the personal experiences of the disciples…[it] includes psychological, spiritual, existential, and sociopolitical ways to understand the Resurrection of Jesus, but for all these, the empty tomb accounts are irrelevant; Jesus' body simply decayed.' (Russell, 2000a:272-3)

Such interpretations place the critical locus of resurrection on the inner transformation of the disciples – their renewal of faith and enlightenment following Jesus' death – rather than on any bodily encounter with a living Jesus. Lüdemann overtly states, 'what we are dealing with in the New Testament texts are images of the people of a specific time that cannot be equated with facts' (Copan and Tacelli eds. 2000:40). Wright concedes the widespread scholarly *assumption* of subjective interpretations but condemns these as groundless, without historical or scriptural foundation (2003:656ff). The denial or misrepresentation of the biblical data renders these views counter to our task. Subjective

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[458] This changed dramatically following a series of consultations in 2001-2002 asking: '*How should we assess the resurrection scientifically and theologically?'* (Peters, Russell and Welker eds., 2002:xii).

[459] Bultmann was an early and prominent proponent. Russell notes several contemporary defenders, including John Dominic Crossan, John Hick, Hans Küng, Sallie McFague, Norman Perrin, and Rosemary Radford Reuther (2002:9); Wright also cites Gerd Lüdemann, Greg Riley, Kathleen Corley, James Robinson (2006:17) and Marcus Borg (Wright and Borg,1999). For debate of the subjective vs. objective views, see Stewart ed. (2006), Copan ed. (1998), Copan and Tacelli eds. (2000).

evaluations may add valuable insights, but taken alone are wholly inadequate interpretations of resurrection.[460]

More recently however, momentum has shifted back toward the objective view. There is ample scholarly justification for this trend,[461] as well as the weight of biblical and historical theology. Science has no issue with subjective interpretations, so the true challenge of seeking scientific-theological consonance lies with the objective view. All three primary representatives – Wright, Polkinghorne, and Moltmann – reject the subjective and strongly uphold a bodily resurrection. Wright claims that the bodily resurrection of Jesus (by which he means a 'transforming revivification' as opposed to resuscitation) provides a *necessary*, not merely *sufficient,* condition for the surrounding historical facts (i.e. the empty tomb and the numerous eyewitness testimonials) (2003:717).[462] That *something* happened is indisputable. Not only is Jesus' resurrection the most probable explanation, Wright claims, but every effort to find alternative explanations has failed, and will continue to fail. Perhaps most importantly, as Wright demonstrates at length (2003), the early Christians universally accepted Jesus' bodily resurrection, the NT firmly attests to it, and a significant branch of 2nd Temple Jews expected just such a resurrection to occur at the end of the age – although not with a single individual.

In science-theology discourse however, the eschatological and cosmological *implications* of Christ's resurrection are in view more than merely the historical event. To this end, the discourse had to agree on new methods of approach. Typically theology responds to new scientific cosmological insights; in this case, the scientific perspective had to find ways to respond to the eschatological implications of a theological truth claim. Polkinghorne and Welker describe this common ground as a *realistic* eschatology, within which the logic of continuity / discontinuity challenges both science and theology to approach the topics in new ways (2000:2).[463] With resurrection, the sciences must face a mode of reality beyond their usual realm of competence, and theology must forego the temptation to 'move into speculations about a *virtual reality*' that science cannot readily

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460 Watts (2000a:53-5) offers a nuanced discussion of the value of *both* the objective and subjective views, concluding that resurrection is best elucidated when both are taken into account (2000).
461 See e.g. Craig (1989); Beasley-Murray (2000); Ladd (1975); Head ed. (1998); Barton and Stanton eds. (1994).
462 Wright argues that neither Jesus' life and teachings, nor his resurrection alone, would have been enough to convince anyone that he really was the Messiah and 'Son of God'; both are necessary (2003:244).
463 See also Welker's lengthier exposition in the same volume (2000a:205-8).

accept (2002:2). When theology asserts a bodily resurrection to a new creation which assumes an eschatological transformation of creation, it immediately runs up against the challenge of physical cosmology. To enable this genuine interaction within technically precise and agreed methodological boundaries, Russell proposed his 'creative mutual interaction' (CMI) model (2002a:16ff), suggesting:

> We must reconstruct Christian eschatology to be consistent with both our commitments to the bodily resurrection of Jesus and thus an eschatology of transformation, *and* with scientific cosmology regarding the past history and present state of the universe. (2002a:24).

Since the bodily resurrection finds its greatest challenge from science, Russell saw this as the ideal test case for the claims of CMI.

What precisely is meant by the term *resurrection*? Within the objective view, two approaches which Russell calls 'the personal resurrection' and 'the bodily resurrection' (2009b:273) indicate the close interaction of continuity and discontinuity. There is a strong continuity of Jesus' personal identity in resurrection, but a distinct change in the nature of the physicality of his body. The empty tomb raises deep questions about the nature of that change. Crucially, while terms such as 'transformation' or 'transfiguration' may apply, the resurrection may *not* be considered merely a 'resuscitation', or a 'restoration' of life.[464] It is the nature of this transformation which lies at the heart of the science-theology discourse, and lays the groundwork for exploring the corporate and cosmic possibilities of a similar eschatological transformation for creation.

Biblical, Historical and Theological Approaches

The essential facts of the resurrection are not in doubt. Jesus died by crucifixion, was buried in a sealed tomb later discovered to be empty, and various groups of people subsequently reported seeing, speaking and meeting with a living Jesus. Polkinghorne adds several collateral considerations: the disciples were immediately transformed from fearful followers to emboldened witnesses; the earliest Christians referred to Jesus only as a present Lord, never as a revered founder – no shrine was established to honour him; and the day of resurrection (Sunday) quickly replaced the Jewish Sabbath in importance as 'the Lord's Day'.[465] The two primary lines of evidence – the empty tomb and the

[464] See Welker's exposition on this point (2002:35-6).
[465] Polkinghorne (2007a:46; 2005a:87; 1983:87).

accounts of many witnesses – are well-established, even ‘historically secure’ (Wright, 2003:686),[466] but the resurrection itself has an a-historical nature which defies normal methods of historical interpretation.[467] As Ladd explains, ‘it is an act of God, and the historian as such cannot talk about God. It is without analogy, being utterly unique, and this places it outside ordinary historical experience’ (1993:363). In Moltmann’s words, ‘Christ’s resurrection is meaningful only in the framework of the history which the resurrection itself opens up’ (1990:236-7). This event of the past opens a new future (2003:17). The historical event may not in doubt, but the nature of that event, interpreted through the enigmatic accounts of the biblical witnesses, is the subject of extensive debate. ‘It was not the disciples’ faith that created the stories of the resurrection; it was an event lying behind these stories that created their faith’ (Ladd, 1993:356).

In Wright’s view much of the controversy would be unnecessary if theology, rather than speculating back through a modernist lens, simply took into account the meaning of resurrection in its historical Jewish context, projected forward in interpretation.[468] Scholars have erred in accepting a form of personal spiritual resurrection while attempting to explain away the bodily accounts in terms of Greek mysticism, Gnosticism, visionary phenomena, or metempsychosis, often by highlighting the unique appearance to Paul as a bright light (Act 9:3-6; 22:6-11).[469] Wright however goes to great lengths to establish the OT basis for the uniquely Jewish concept of resurrection,[470] emphasising *both* a physical future expectation for humanity *and* a metaphorical expectation (i.e. of Israel’s restoration). The meaning was clear: the Jews expected resurrection in the distant future, pagans denied it, and Christians affirmed it had happened to Jesus – but all understood the term *anastasis* (resurrection) to mean the same thing: a new, embodied life *after* a period of death (Wright, 2003:31).

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[466] Craig confirms that these basic facts are ‘widely accepted by New Testament scholars today’ (Copan and Tacelli, 2000:32).
[467] See Moltmann (1967:172ff; 1968c:135-6; 1990:234ff; 2003:17), Ladd (1993:363), Wright (2003:26-8). Pannenberg however, strongly emphasises the historicity of the event, however interpreted (1994:360-2).
[468] Contemporary scholarship has shifted in this direction since Wright’s publication. Anticipating such a shift, see Butterworth (1998), Johnston (2002), and earlier Torrance (1976:41).
[469] Pannenberg notes scholarly acceptance of a ‘vision of light’ appearance whilst typically viewing Gospel accounts of a corporeal Jesus as having ‘such a strongly legendary character that one can scarcely find a historical kernel of their own in them’ (1968:89).
[470] Wright demonstrates the dominance of the Pharisaic tradition (against the Sadducees), concluding ‘with the few exceptions noted already, it was widely believed by most Jews around the turn of the common era’ (2003:147). He highlights the description in 2Mac:7 clarifying the Jewish anticipation of a general resurrection at the end of the age; none expected a single forerunner.

In the science-theology dialogue, the metaphorical interpretation is rarely referred to explicitly, but as will be seen, plays an important role in understanding the concept of the NHNE. Wright explains:

> Resurrection, in the world of second-Temple Judaism, was about *the restoration of Israel* on the one hand and *the newly embodied life of all YHWH's people* on the other, with close connections between the two; it was thought of as the great event that YHWH would accomplish at the very end of 'the present age', the event which would constitute the 'age to come', *ha 'olam haba.* (2003:205 author's italics).

The early Christians retained an identical belief in bodily resurrection as their Jewish counterparts but adopted fresh interpretations of the metaphorical – with greater present significance. First as Wright points out, 'Christianity was a 'resurrection' movement through and through' (2003:210); believers were 'resurrection people', leading transformed lives through the preaching of the Gospel even while awaiting their future bodily transformation (2003:217). Wright denotes this as 'inaugurated eschatology'. Resurrection became understood as a two-stage event (Php 3:20-21): first the Messiah; then, when he returns, those who belong to him – the latter being anticipated by, and metaphorically encompassed in, the former. But the primary intent remained future.

Secondly, in later Christian usage, the metaphorical meaning took on a considerably wider eschatological perspective, no longer confined to Israel's restoration, but encompassing the whole earth. Moltmann proposed an important shift in theological thinking from a 'historical-eschatological theology of the resurrection to a historical-ecological theology of rebirth' (1990:247), a distinction incorporated into the science-theology discourse. This mixture of present metaphorical reality anticipating a future event – itself grounded in the past demonstration of God's power in raising Christ from the dead – precisely delineates the tight interconnectedness of the meanings of resurrection (and the consequent interpretational challenges). For Wright this sequence began with 'the unveiling of the Messiah as the image of the creator God, the 'firstborn' both of creation and then of the new creation' (2003:239; Col 1:15-20). The resurrection of Christ was increasingly interpreted not as the 'end of the age' but as 'the beginning of the end'.[471] His resurrection *inaugurated* a new age in the midst of the old. It implied that the new creation had already begun, was being made real in the lives of the believers

[471] See Moltmann's assertion (2010:46; 2003:16) that with Christ's resurrection, the last days have begun, and an awareness of the end of history is instilled.

and would be consummated in the future.[472] Therefore Wright propounds, 'with the resurrection itself a shock wave has gone through the entire cosmos: the new creation has been born, and must now be implemented' (2003:239).

Science and the Resurrected Body

The scientific perspective has no real difficulty accepting the underlying facts of the above biblical-historical analysis. But as Watts states, 'It is, of course, the idea of the resurrection of the *body* in which the natural sciences would take most interest' (2000:53). Since the theological interpretation hinges entirely on the claim of Jesus' *transformed* body raised from the dead, this is a crucial matter, and the dialogue revolves around issues of continuity and discontinuity. We need not belabour the point that those in the dialogue begin from a position of acceptance of the basic claim. Science cannot confirm any unique non-repeatable event with the same type of certainty as experimentally repeatable findings, but Polkinghorne and others nevertheless find the arguments persuasive: 'There are good evidential reasons for taking with the utmost seriousness the claim that Jesus was raised from the dead, however contrary that belief may be to conventional expectation' (Polkinghorne, 2007a:46). The intent then is not to attempt to validate or disprove the resurrection, but to assess, if taken as true, the nature of the transformation.

The three key considerations in the science-theology discourse are the nature of the resurrected body, the nature of God's action, and Christ's ascension. The first reflects 'the strange tension between palpability and appearance' (Welker, 2002:35) or as Joel Green expresses, the 'elusiveness and physicality' of Jesus' post-resurrection body (2004:91ff). Polkinghorne describes it as 'a corporeal presence, though necessarily of a transformed kind, as Christ's power of sudden appearance and disappearance makes clear' (2008:95). Jesus himself emphasises the continuity of both his identity and his body: 'Look at my hands and my feet. It is I myself! Touch me and see; a ghost does not have flesh and bones, as you see I have' (Lk 24:39). Jesus ate in their presence, breathed the same air, walked and spoke with his disciples, was seen, heard, and touched like any corporeal being. Yet he also appeared through locked doors (Jn 20:19) and disappeared from sight (Lk 24:31). Perhaps most curious of all was the occasional inability to

[472] In Christian understanding, 'the new creation begins with Christ's resurrection' (Moltmann, 1990:252).

recognise him, at least until 'their eyes were opened' (Lk 24:31; Jn 20:15, 21:4). Oddities of recognition are seen in statements such as, 'None of the disciples dared ask him, "Who are you?" They knew it was the Lord' (Jn 21:12).

The response to these idiosyncratic accounts is surprisingly uniform. Continuity is found in the same physicality, the same personal identity, the positive recognition of the person and body of Jesus. Murphy argues that personal identity must include not only bodily continuity and memory, but also 'self-recognition, a continuity of moral character, and personal relations, both with others and with God' (2002:208). All of this Jesus demonstrated – yet Murphy stresses that bodily continuity does *not* necessarily indicate a continuity of matter.[473] This essential distinction enables corporate resurrection to follow the same pattern, without asserting a resurrection body comprised of the same collection of particles and matter. This distinction between a 'transformed material continuity' and 'personal continuity' is highlighted particularly by Russell (2009b), yet with no consensus.[474] There is consensus however, that the biblical accounts scrupulously exclude any possibility of having been raised back to natural life like Lazarus or others temporarily restored but still subject to mortality.[475] Nevertheless, continuity is found in the *same* Jesus who died being raised to new life.

Discontinuity is found in the changed nature of Christ's body, no longer subject to death, nor apparently to the physical constraints of the laws of nature. Welker calls it, 'A transformed body, a transfigured body, a body that is also called "spiritual" or "glorified" (cf. Rom 15:46; Php 3:21)' (2002:38). He even suggests new routes of recognition and identification. Wright uses the word 'transphysicality' to capture these new and unexpected characteristics,[476] but the most common expression indicating both the continuity and discontinuity of the body is simply 'transformed'.[477] The transformation

[473] Russell argues that the physical sciences raise 'tremendous, perhaps insurmountable, challenges' to a material transformation (2002b:273). This is partially mitigated by Murphy's point that particular matter itself is not necessarily in view with bodily resurrection; however others take the empty tomb to mean precisely that.
[474] Polkinghorne uses the term 'transmutation' to the material transformation. This distinction will feature more significantly in relation to theories of the transformation of creation to new creation.
[475] See Moltmann (2010:45); Polkinghorne (2007:41; 1994a:115), Russell (2002a:9).
[476] Meaning a 'transformed physicality' (2003:661, 604-7).
[477] Polkinghorne most often uses 'transformed' (2002a:73; 2008:95), yet occasionally refers to the 'transmutation' of Christ's body (1996a:77; 2004:22) in specific reference to the material aspect, which he does not see as a precedent for general resurrection.

evident in Christ's resurrection presages similar issues regarding the transformations of both humanity and the earth.

The second key consideration is the utterly unique *nature* of this particular divine action.[478] The *fact* of divine agency is agreed: 'By his power God raised the Lord from the dead, and he will raise us also' (1Cor 6:14). But as Polkinghorne states, 'If the resurrection happened, it could only have been through a special exercise of divine power' (Polkinghorne, 2008:93). He refers to resurrection as a miracle, yet distinct from all other biblical miracles.[479] For many the term miracle simply does not go far enough. While a miracle refers to an unusual manifestation of God's power in the world and appeals to God's 'direct causal agency' (Blomberg, 1996:531), resurrection is considered an altogether unique sort of miracle, one that not only manifests God's power *within* the bounded reality of the space-time creation, but challenges the very nature of that reality itself. Thus Russell claims:

> One could say that the Resurrection of Jesus is "more than a miracle" because nature itself is changed by God's new act; it is not just a unique and extraordinary event within an ordinary background of fully natural prior and subsequent events. (2002:282).

In Ladd's words, 'It means nothing less than the appearance upon the scene of the historical of something that belongs to the eternal order! …It is the manifestation of something utterly new' (1993:362-3). The laws of nature, according to Watts, 'operate under a certain range of conditions. Outside their boundary conditions, it is unpredictable what might happen' (2000a:53). '[Science] possesses no a priori power to rule out the possibility of unprecedented events in unprecedented circumstances' (Polkinghorne, 2007a:35). Many in the science-theology dialogue view resurrection as an event from 'outside' the conditions of the present creation, representing the changed nature of time, space and matter in the future *new* creation, for which Christ's resurrection is both model and inauguration.[480]

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[478] Moltmann sees a reciprocal agency: 'God is the one who 'has raised Christ from the dead'. On the other side God was himself 'in Christ', who has risen from the dead' (1990:248); cf. (1967: 200).
[479] Polkinghorne writes extensively on the topic of miracles. See e.g. (2007a:34ff; 2005b:ch 6; 2005c:ch 4; 1998b:92-3). Resurrection is always considered as unique.
[480] This is not the only possibility. There may be an explanation for resurrection from *within* the current laws of nature, which simply cannot be determined from a single non-repeatable event. See e.g. Watts (2008).

The third consideration is Jesus' post-resurrection ascension. If he did not ascend *bodily* to heaven, the resurrection accounts fall apart; if he did, there are deeply challenging questions of where he is now. In debate with Craig, Lüdemann challenged, 'If you take one of the elements out of the sequence – resurrection, ascent to heaven and then heavenly return – the whole thing will collapse' (Copan and Tacelli:40). Craig responds: 'I believe that Jesus, yes, left this four-dimensional space-time universe, and that is a perfectly comprehensible and coherent notion, scientifically speaking' (58). If the physical space-time universe were the totality of creation, this would be an incoherent conclusion, but our definition of 'heaven' as 'God's dimension of present reality' provides plausibility. But traversing to God's dimension of space cannot mean departing this dimension of time – particularly considering our conclusion that God relates to creation within creation's own temporal structure. Craig's response might be modified to say that Jesus left our spatial dimension but remained in the created universe.

Torrance ascertains ascension as a 'reverse incarnation', positing the view that Jesus enters into the heavenly realm remaining fully human and embodied, 'without ceasing to be man or without any diminishment of his physical, historical existence' (1976:129).[481] In the incarnation, Jesus is the place where God and man fully meet. 'Jesus Christ is that Temple of God as a living reality on earth and among men… where he has appointed us to meet him' (1976:129). As earth made space for God in Christ, heaven makes space for man in Christ. The ascension of the resurrected Jesus transforms heaven. 'Something quite new has been effected in the heavenlies which must alter its material content in our understanding of what heaven is' (1976:129). Torrance considers space relationally as *space for* something, such that *place* is defined by what occupies it (1976:13). This conforms both with the Moltmann-Polkinghorne view of heaven and earth as an 'open system' where 'heaven is the outward completion of the earth,'[482] and with temple-theology's view of Jesus presently asserting his kingly rule from heaven while remaining intimately connected to his earthly temple-body (i.e. people) through the Spirit. In this way, the ascension anticipates the eventual joining of heaven and earth, which Wright sees as the locus of new creation, concurrent with the resurrection of humanity (2003:217).[483] Incarnation, resurrection and ascension may all be understood as part of a

[481] Wright concurs with this view (2008:111); Jesus is seated in the heavenly realm (Eph 1:20; Heb 9:24).
[482] Refer to chapter 3: *heaven and earth as intertwined reality.*
[483] Wright also views bodily ascension as the vindication of Jesus as Israel's representative, and the enthronement of Israel's Messiah as Lord of the whole world. (2003:655).

single process of cosmic reconciliation and temple-building, connecting heaven, earth, and humanity in Christ.

The Resurrection of Humanity

Jewish expectations never included a Messiah resurrected independently from the whole of Israel. This was what the first Jewish believers had to reconcile. If it happened to God's anointed one separately, what did this imply for Israel – for those who believed – or for all humanity?[484] Accepting the bodily resurrection of Christ means anticipating a similar destiny for humanity; the two are inextricably linked. As Polkinghorne states, 'What happened to Jesus within history is the foretaste and guarantee of what awaits the rest of humanity beyond the end of history' (2004:168). The 'end of history' is debatable, but all agree that the biblical data depicts Christ as the forerunner of humanity's corporate resurrection. 'For since death came through a man, the resurrection of the dead comes also through a man… But each in his own turn: Christ, the firstfruits, then when he comes, those who belong to him' (1Cor 15:21,23). This corporate resurrection is clearly a future event, yet temple theology speaks of process, and Wright has pointed out resurrection's metaphorical meaning for the present. What then is the link between process and event, continuity and discontinuity?

Resurrection as Continuity

Welker asks, 'Do we participate already in the resurrection – or is it a future event? Or is it both?' (2002:39). The biblical evidence indicates both – albeit in distinctly different ways.[485] Ted Peters describes the continuity between present experience and future reality as a 'prolepsis' of inclusivity. 'Our resurrection is incorporated into Christ's resurrection. They belong together. They come in a single ontological package, even if separated in time' (2002:304). Temple theology incorporates the prolepsis of resurrection while offering the expanding 'Jesus-temple' as the metaphor for present growth and expansion, incorporating believers as 'living stones' (1Pet 2:4-5). Welker adds that Christ's resurrection 'calls for the participation of the witnesses in the glorified life, a

[484] The extent of resurrection is debated. Clearly those 'in Christ' are included, yet the fate of others is less clear – some passages (e.g. Rev 20:13, Dan 12:2) indicate a resurrection for the unrighteous prior to judgement. For exposition of Dan 12:2 in terms of resurrection, see Lampe (2002:109ff).
[485] Col 3:1 states, 'Since then, you have been raised with Christ…' yet Paul condemns those who falsely claim the resurrection has already taken place (2Tim 2:18). The context indicates which meaning is in view.

participation that in turn transforms the lives of the witnesses' (2002:39). The nexus for this connection between present process and future event is the Spirit of God. Through his Spirit, 'we already participate in the resurrection, yet not in ours but in Christ's' (Thomas, 2002:267). The presence of the Spirit unites believers together in Christ and *begins* a process to be completed in the resurrection of the body, through the agency of the same Spirit (Rom 8:11). The Spirit prepares and sanctifies that corporate body for its final transformation, providing 'a pneumatological continuity' (Thomas, 2002:272).[486] The new body as Wright describes, is 'a *soma pneumatikon*, a body animated by, enlivened by, the Spirit of the true God.' (2003:354). There is significantly both an internal and an external dimension to resurrection.

Resurrection as Discontinuity

The 'event' of resurrection must involve not only those in the intermediate state, but those still alive at Christ's return: 'We shall not all sleep, but we shall all be changed… the dead will be raised imperishable, and we will be changed' (1Cor 15:51).[487] While Christ models humanity's resurrection in terms of continuity of identity, the question of *material* transformation cannot apply uniformly since the material aspect of persons long dead is no longer present to be transformed; the matter of the physical body has decomposed. Christ cannot in that sense be the *model* for corporate resurrection. At most one could surmise that those 'alive at his coming' may be 'changed' like Christ, through a material transformation. Yet since no biblical distinction is made between those resurrected through immediate transformation and those resurrected through death and the intermediate state, the only conclusion is that the direct transmutation of matter – although possible – is not necessary, and consequently of no significance in the context of humanity.[488] The whole person, or the 'pattern that is me' (Polkinghorne), is reconstituted in resurrection in a new bodily form, the *soma pneumatikon.*

The discontinuity highlighted by Paul (1Cor 15:44) between *soma psychikon* 'natural body' (NIV) and *soma pneumatikon* 'spiritual body' (NIV) is exposited in depth by

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[486] Many others advocate a similar view of the Spirit of God advancing *process*: Moltmann (1985:262-4, 2010:62); Wright (2008:163); Polkinghorne (2004:168-9), Pannenberg (1998:622-4), Ladd (1993:362), Lampe (2002:109), Schuele (2002:235), Torrance (1976).
[487] Whether resurrection includes only those 'in Christ' or all humanity is a separate issue (chapter 9).
[488] Polkinghorne finds material transmutation of matter highly significant, though not the *direct* transmutation of the same matter as the original body. Rather, his concern is with matter in general (2005c:101-4).

Wright, who adamantly opposes the dichotomy in some translations between 'physical body' and 'spiritual body'(2003:347ff).[489] Modern western thinking typically interprets this (incorrectly) as a 'physical' vs. 'non-physical' dichotomy (Wright, 2003:348), but the common element in both is clearly *soma* (body). Rather, the first is a physical body, subject to sin, death, and decay; the latter is *also* a physical body, enlivened by the Spirit, no longer subject to death, raised incorruptible. Polkinghorne firmly advocates Wright's interpretation, as do others in the science-theology dialogue.[490]

> An essential point is that both are *bodies…* in the Hebrew sense of a complete animated being. In that case, *soma pneumatikon* is not [to] be thought of as some ethereal entity, the oxymoron of a body made of spirit, but rather as a being totally suffused by the life-giving spirit of God (Polkinghorne, 2002a:77-8).

This discontinuity in the nature of the body raises the critical question whether this may also be the model for the discontinuity and transformation of creation itself.

Relational Transformation and Eschatological Time

Earlier assessment of the intermediate state highlighted the particular importance for Moltmann of the relational dynamic, implying that a person *cannot* be whole or complete merely as an individual. Embodied existence alone does not denote personhood; human life is only human in a relational context.[491] While this was disputed and difficult to conceive in the intermediate state, it is generally considered essential in the context of corporate resurrection. Hans Weder asserts:

> To be a body means for Paul that human beings live fundamentally in a relationship; they are in relations to themselves, to the world, and to God. Bodily existence is an existence that is – at its best – rich in relationships… Eternal life as well is somatic, personal, rich of relations. (2000a:194).

The dilemma for Moltmann is that such relationships, in the context of eternal life, must be wholly transformed – healed, restored, reconciled, injustices made right, failings forgiven. Volf similarly claims that resurrection must involve social reconciliation (2000:262-3) and Thomas refers to the need for 'a deep *renegotiation of identity*' in light of one's past life (2002:275 his italics). But Moltmann recognises more assiduously than

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[489] Wright specifically faults the RSV, NRSV and REB in this regard.

[490] See Polkinghorne (2005c:101-4), Green (2004:97-98), Ladd (1993:609-10), Pannenberg (1968:75-6), Peters (2002:300ff), Weder (2000a:193-4). Cf. Johnson's (2003) unusual exegesis arriving at the same conclusion.

[491] Refer to the discussion (chapter 5) of community in the intermediate state, in section *Moltmann and Polkinghorne.* Cf. Murphy on social dynamic in resurrected state (2002:207).

others that such transformation requires *time*. When and how does this transformational *process* occur – before or after the resurrection *event*?

Scholars who see resurrection as consummation largely fail to take this into account. But Moltmann uniquely provides for relational transformation through his concept of 'eschatological time' during the intermediate state. Yet 'eschatological time' is deeply problematic. In earlier works, Moltmann distinguished between eschatological time and eternal time, the former described as 'the universal fulfilment of what was promised in historical time' and the latter as 'the time of the new eternal creation in the kingdom of divine glory' (1985:124). Unlike Polkinghorne and Wright, Moltmann proposed an active, relational intermediate state as the space for this process of healing, reconciliation and fulfilment of the 'spoiled life' or 'the life cut short' after death (1996:118). Yet this could not take place in historical time, for in Moltmann's view, one's entire 'lived life' must be gathered together and restored as a whole – in relation to all other lives – and to Christ. Universal eschatology must embrace individual eschatology. 'Eschatological time' therefore takes on a thoroughly relational character. 'If we understand time relationally… as Christ's time *for* human beings, then the dead too have 'time' in Christ, because Christ 'has time' for them' (Moltmann, 1996:105).

For Moltmann, the process of transformation necessarily *precedes* resurrection. 'Transfiguration, finally, anticipates the transmutation into the beauty of the divine life' (2010:62). But the distinction between eschatological and eternal time is lost with the proposal of the 'eschatological moment', in which 'eternity breaks into time, and what comes into being is the eternal present. At that moment all the times become simultaneous… *diachronically*, throughout and across the times' (2010:62).[492] This moment arrives for each person at death and continues until its completion when the dead are raised. 'Eternal life' becomes the continuation of the eschatological moment on the other side of resurrection, no longer 'historical time', but experienced as 'unrestricted livingness, perfect fullness of life in unrestricted participation in the life of God' (2010:63).

[492] 'Eschatological future is to be understood *diachronically*: it is simultaneous to all the times, and in being so it represents eternity for all things.' (1990:303). Elsewhere Moltmann refers to 'aeonic time' (2004:159) described as dynamic yet cyclical, reversible, with no past or future, yet moving in a circular course.

Bauckham perceives Moltmann as reacting against a historical progressivism that collapses eschatology into history, yet in so doing he 'insists on the *transcendence* of the *eschatological* future over history' (1999c:157). The eschatological future is not a future in historical time, but a future which transcends all time and history. 'It is not future history, but the future of history' (1999c:157). Moltmann *also* reacts against any notion that this is a timeless eternity, since relationality must be both dynamic and temporal. He describes a Boethian notion of eternity (2010:63), where life is participatory and fully lived in relationship. '*Chronos* disappears and is replaced by *kairos*' (2010:64). Bauckham raises the considerable problem of how this eschatological moment can be understood both as a moment within the flow of historical time, *and* as a relationship to a transcendent future 'eternal time' (1997c:176). There is a speculative fluidity (even incoherence) in Moltmann's expression of eschatological time which defies any precision of meaning.

Moltmann's speculation on time has no biblical grounding,[493] nor does it meet the criteria of critical realism. He desires to maintain the biblical foundations of narrative, relationality, and temporality while theorising a 'moment' of diachronic simultaneity in which human and social transformation takes place – but we have previously rejected attempts to combine simultaneity and temporality. Furthermore, the notion of a completed process of transformation *prior* to eternal life indicates an implicit denial of such necessity *post* resurrection. This raises the important concern, if a process of social transformation is a necessary component of eternal life, when does that transformation take place? It must occur either in the intermediate state or as a temporal aspect of resurrected life itself. We may reject Moltmann's eschatological time without rejecting the possibility that such process may *begin* in the intermediate state; yet it cannot be fully accomplished there if indeed much of humanity will be transformed 'at his coming', without passing through death.

Resurrection as Continuing Transformation and Renewed Temporality

The rejection of Moltmann's arguments leaves unanswered the question, should resurrected life be understood as *perfection* or *perfectibility*? Is there a continuing process of moral growth, social reconciliation, cultural redemption, and transformative

[493] As determined in chapter 5, the NT offers no description of time or activity in the intermediate state. But the concept of a diachronic 'moment' contradicts the Bible's clarity on temporality.

work of the Spirit even after the event of corporate resurrection, or is it a *fait accompli*? The presumptive view, reflecting Moltmann's, is one of perfection, fulfilment, and completion. Yet if 'perfection' is attained in the 'event' of corporate resurrection, issues of social injustice, cultural oppression, slavery, tribalism, or any number of social sins remain relationally unaddressed – ended, but lacking any transformative process of forgiveness, reconciliation, justice or restoration. The question applies to individuals as well, although the internal work of the Spirit provides at least some level of transformative process prior to resurrection. The idea of post-resurrection perfectibility and process, only hinted at by Volf and Thomas, is a relatively unexplored aspect of the dialogue.[494] Even if a morally redeemed state is in view for the individual, the significance of the social context of human life makes a similarly redeemed society highly implausible without an identifiable process of restorative transformation.

Polkinghorne is one of the few scholars to have given due consideration to a continuation of moral progress beyond resurrection. Crucially, he sees process as a consequence of temporality; and temporality, he insists, is as intrinsic to humanity as embodiment (2004:156). Process, for Polkinghorne, is recognisable in three distinct aspects of resurrected life: the continuing operation of God's love and mercy; the continuing transforming work of sanctification; and the continuing unfolding of the exploratory nature of life in the new creation, characterised by 'dynamical perfection' (2004:160). Polkinghorne lacks the thoroughly developed intermediate state of Moltmann, so conjectures the same transformative, reconciliatory process continuing *after* resurrection, where past hurts are healed, hearts made clean, and identities restored (2004:159). Rejecting any instantaneous transformation, he argues for a restorative process of 'purgation' as the perfecting quality of future judgement.[495] Polkinghorne's 'dynamic perfection' in complete contrast to Moltmann, is not fulfilment through completion, but through 'the unending exploration of the inexhaustible riches… progressively unveiled to us' (2004:160).[496]

Polkinghorne is highly critical of both Pannenberg and Moltmann for their insistence on 'totality' and 'the fulness of time' in new creation, diminishing temporality and thus

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[494] Daley (2002:140) purports it was upheld by early apologists as 'the completion of the human potential.'
[495] This is not judgement as condemnation, but as a self-exposure, 'a painful encounter with reality, in which all masks of illusion are swept away' (Polkinghorne, 2002a:131).
[496] Polkinghorne's 'dynamic perfection' conflicts with Moltmann's more static view that nothing will be lost, by implying that 'not everything that has been will be preserved in being' (2002b:119).

negating any role for continuing process (2002a:118-9).[497] Similarly, Bauckham questions Moltmann's contention that transience can only be considered an imperfection (1999a:12).[498] For Polkinghorne, transience is simply the natural consequence of process, arguing (contra Moltmann) that 'not everything that has been will be preserved in being' (2002a:119). Wright is equally convinced of continuing process post-resurrection. In distinction from Polkinghorne however, he does not explicitly advocate the need for continuing moral progress or reconciliation for humanity, but rather asserts a continuity of purpose regarding humanity's *role* in new creation. Reminiscent of temple theology's functional, relational dynamic, the new humanity will 'share in the running of [God's] new creation' (2013b:1098) and will join in establishing God's sovereign rule (as in the Gen 1:26-28 commission) over all the world.[499] The present age is a necessary training ground for God's people to develop the character and wisdom they will need for that task – but it is *resurrected* humanity 'through whose stewardship creation will at last be brought back into that wise order for which it was made' (Wright, 2008:200).

Despite insisting on temporality in new creation, Polkinghorne, like Moltmann, speaks of the 'end of history' (2004:168). We must ask what this means for science-theology, and why 'historical time' is thought to end with corporate resurrection? Even Wright's advocacy of teleological process and continuity into the new creation allows for the possibility of a different eschatological time:

> Time matters; it was part of the original good creation. Though it may well itself be transformed in ways we cannot at present even begin to imagine, we should not allow ourselves to be seduced by the language of eternity… imagining that time shall be no more.' (2008:162-3).

Polkinghorne, preferring a temporality which expresses a 'coherent unity' between present and new creation, rejects Moltmann's restoration of all times, yet nevertheless proposes a radical distinction between the two times:[500]

> There will also be a dimension of discontinuity, so that the 'time' of the world to come is not just a prolongation of the time of this world, or simply its immediate

[497] Pannenberg claims fulfilment is impossible 'without an end to time' (1998:587).
[498] In opposition, philosophers such as John Passmore (1970) assert that static perfection cannot be a human characteristic. To achieve perfection would be to cease to be human and become divine; humanness involves striving to become more than we are at present.
[499] J. Davis' study on 'work' in the new creation argues that not only theocentric and anthropocentric work will be present (based on the two great commandments), but also creation-centred work (based on the original commission) (2007:259). Restoration of the commission in new creation is a frequent eschatological theme. See e.g. Hoekema (1994:ch20), Alcorn (2004:ch12, 22).
[500] The idea of a distinct eschatological time is a common theme. Wilkinson suggests a higher dimension of ontologically real eternal time of which our earthly experience of time is only a small part (2010:126).

> successor. Rather, it is a new time altogether, possessing its own independent nature and integrity (2004:157).

Polkinghorne sees Jesus' resurrection as an event both 'within, as well as beyond, present history' such that his strange resurrection appearances may be understood as 'arising from limited intersections between these two worlds' (2002a:121).[501] All of this seems a radical proposal for an avowed critical realist, unless there is sufficiently strong rationale to suggest that 'the world to come' *requires* an independent time. To Polkinghorne and many others in the science-theology dialogue, the nature of the new creation itself, so radically discontinuous from the present, in terms of the end of death, transience, decay, and cosmic deterioration, requires a transformation of the space-time universe and an end to present history.[502]

Resurrection and the New Creation

Moltmann writes, 'We cannot talk about the new creation of human beings without talking about the new creation of the earth. There is no eternal life without "the life of the world to come"' (2004:151).[503] New creation is the *context* in which the resurrected life will be lived. To this all agree, but what is the *nature* of that new creation – and more importantly, how does present creation *become* new creation? What is the connection between present and future, and what level of discontinuity in the transition? Moltmann comments that 'every resurrection presupposes death' (2007b:147), and many use the language of resurrection to describe the New Creation arising out of the old – but in what sense does this imply a 'death' of the present creation or a 'rebirth' of the new? We've seen that the biblical data indicates devastation and an end to the present world order, but not the 'death' of the earth, nor of all living things. Will earth and all life be somehow 'transformed' in a similar way to human resurrection? Is Christ's death and resurrection an appropriate model for the earth? And what of process vs. event?

Having established that Christ's resurrection *inaugurates* the new creation, we see in temple theology – for humanity – both the *process* of transformation (through the Spirit) and the final *event* of resurrection. Is there also a process of transformation for the earth,

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[501] See his further explanation of 'dimensions temporarily enmeshed and then separated' (2005a:172).
[502] See Polkinghorne (2002a:121; 2004:157; 2008:107).
[503] Moltmann sees a completely interdependent relationship. Human beings and the earth belong together and therefore must be redeemed together. 'Only the new earth offers possibilities for the new embodiment of human beings' (1996:104).

or purely a divine cosmological event, and what would that entail? A spectrum of terms is used to express the nature of this transition: renewal, restoration, redemption, transformation, resurrection. But while often used interchangeably, they are not synonymous. The first two emphasise greater continuity, the latter two highlight discontinuity, and 'redemption' straddles them both. Transition is complex, not uniform. To highlight the problem, a simple allegory: A father and daughter are picnicking under a beautiful willow tree. The girl asks, 'will there be trees in the new creation?' 'Yes of course,' says her father. 'But what about *this* tree' she asks, 'Will *this* tree be in the new creation?' The complexity of non-human creation cannot be summed up as merely 'the earth' or 'the cosmos'. Does transformation include individual animal life, plant life, the whole earth, all matter, 'heaven and earth', time, the entire space-time universe? Indeed, new creation as the *context* of corporate resurrection may be far more complex than is usually conceived, and here we will assess the disparate views on the transition toward that new creation.

Polkinghorne and the Transformation of the Universe

For Polkinghorne, it makes no sense to talk about human resurrection apart from the transformation of material creation as a whole. 'The scope of this new creation is cosmic and it is not limited to human destiny alone' (2002a:84). By 'cosmic', Polkinghorne means 'in the widest possible terms embracing the whole universe' (1988a:65). The cosmic Christ of Col 1:20 will reconcile to himself *all things*. A frequently cited passage is Rom 8:18-25, emphasising that 'creation itself will be liberated from its bondage to decay'. Polkinghorne represents a general consensus in the science-theology discourse which a) relates the physical resurrection of humanity to the destiny for *all* creation; and b) equates 'creation' with the physical universe.[504] Nancey Murphy writes,

> Our essential physicality emphasizes our unity with the rest of nature, and suggests that we are not saved *out of* this cosmos, but as part of it. That is, it leads us to expect that the entire cosmos will be transformed or re-created in the same way as we humans are. (2002:203-4).

[504] Physicists and cosmologists in the dialogue generally presume creation as the physical universe without defending this position, yet theologians do not necessarily have the space-time universe in mind when speaking of 'new creation'. See Wilkinson (2010:109).

Polkinghorne reasons that eternal life requires eternal matter.[505] He sees humanity and the cosmos as indissolubly linked. 'The universe… will have its resurrection beyond death, just as we shall have our resurrection beyond our deaths. In fact the two destinies are one' (Polkinghorne, 1996b:100).[506] The 'death' here referred to is not the far-future death predicted by scientific cosmology, but the theological transition from old to new creation. 'If the universe is a creation, it must make sense everlastingly and so ultimately it must be redeemed from transience and decay' (Polkinghorne, 2004:146). Creation's 'bondage to decay' is interpreted as the inevitable movement toward disorder and randomness rooted in the second law of thermodynamics (2004:164). Consequently, such natural laws must be overturned in a new creation.

Polkinghorne envisages 'a new kind of 'matter' endowed with internal organising principles of such power as permanently to overcome any tendency to disorder' (2004:164). For scientists, such radical discontinuity goes completely against the grain, and Polkinghorne is well aware of the danger of appearing to advocate a 're-creation'. He goes to great lengths to reinforce a continuity between old and new creation, and this is why for Polkinghorne, the fact of the empty tomb – indicating a material transformation of Christ, and thus continuity – is so very important.[507] To express this continuity, Polkinghorne relies heavily on the idea that the new creation is not *ex nihilo* but *ex vetere* ('out of the old'), a distinction which has become standard in the science-theology dialogue. He carefully qualifies the meaning of 'new' in 'new creation' to ensure it does not entail abolition but transformation (1991:103). And yet he claims, 'it is not a *second* creation but a truly *new* creation, one moreover that could come about only by the redemption of the old creation' (1995f:107). Redemption here does *not* mean from sin or the curse of Gen 3:17, but from present processes of transience, death and decay. New creation will 'have its own form of 'space', 'time' and 'matter'. Its process can and will be different from that of this present world… The new creation will be a world wholly suffused with the divine presence' (Polkinghorne, 2002a:165).

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[505] '[New creation] will be closely integrated with the energies and life of God and so its 'matter' may be expected to be endowed with different divinely bestowed properties that will free it from the shackles of transience and mortality' (2002a:xvii).
[506] Polkinghorne frequently speaks of a destiny for all matter; see (1988a:65; 1991:103; 1995f:108).
[507] Polkinghorne frequently asserts the vital significance of the empty tomb (e.g.1991:103; 1995f:108; 1996a:55; 2004:168).

There is almost a sense of desperation in the desire to retain a truly meaningful continuity with the old creation while advocating the extent of radical 'newness' of the new. Polkinghorne uses a range of terms to hold together continuity and discontinuity, describing *ex vetere* as 'the resurrected and redeemed transformation of the old' (2004:149).[508] Russell attempts to clarify the continuity aspect of *ex vetere* by arguing for an innate potential:

> God must have created the universe *such that it is transformable*, that is, that it can be transformed by God's action. In particular, God must have created it with precisely those conditions and characteristics which it needs as preconditions in order to be transformable by God's new act… *the New Creation*. (2008a:308)

Despite this transformability, Russell still clearly sees this as an 'act' of God.[509] Polkinghorne proposes kenotic creation as a two-stage process:[510] the first is present creation, in which death, suffering, mutation, and extinction are the necessary costs of the fertility and evolutionary creativity of a universe given the freedom to 'make itself' and explore its inherent potential. The second is the consummated creation which arrives at its teleological goal, such that 'there is no need for the evolutionary sequence of finite generations… eschatological fulfilment will be attained through a panentheistic participation in divine reality' (2008:108).[511] There will be no more death or decay, and all creatures will, in divine *theosis*, 'share in the life of God' (2002b:53-4). 'A sacramental destiny awaits the universe' (1991:103).

Though Polkinghorne calls this a two-stage 'process', there is no process evident *between* these two acts of creation. Transition is marked instead by an unimaginable transformative act of God, where the continuity of *ex vetere* is at the same time a complete suspension of *creatio continua.* This divine event does not come about through natural evolutionary processes. Transmutation of matter merely indicates a relational continuity, not process. Russell is more forthright in describing new creation in inverse terms. Unlike present creation where discontinuity is occasionally found within underlying continuity, in new creation he suggests, 'elements of continuity will be

[508] Elsewhere terms are frequently interchanged: 'Redemption of cosmic scope' (2002b:49); Universe as 'resurrected' (1996b:100); 'divinely transmutated matter' (2000a:39).
[509] See also Russell (2006:100). God's 'new act' cannot be merely 'within the routine phases of nature'.
[510] For detailed exposition: Polkinghorne (1994:167-8; 1998b:116; 2004:148-9,164-5; 2005b:113; 2008:107-9).
[511] Polkinghorne rejects panentheism as a present reality but affirms 'the eschatological hope of a sacramental panentheism as the character of the new creation' (2004:166). See also Polkinghorne (1994a:168; 2008:108).

present, but within a more radical and underlying discontinuity as is denoted by the *transformation* of the universe by a new act of God *ex vetera* [sic]' (2008:309). Neither Polkinghorne nor Russell distinguish between general 'matter' and its particular forms. Material continuity and identity of any *particular* tree, dog, bacteria or galaxy is left unexplored,[512] not to mention books, buildings, art, and all non-living matter, equally subject to transience and decay. Polkinghorne's emphasis on *ex vetere* presents a veneer of continuity to what is in fact 'the radical transformation of the background conditions of space, time, matter and causality, and… a permanent change in at least most of the laws of nature' (Russell, 2008:309).

Wright and the Renewal of Creation

In turning to a milder form of transition with a greater emphasis on continuity, two key differences immediately surface: the scope of new creation, and the material nature of transition. The relational nature of temple cosmology and the biblical understanding of creation as 'heaven and earth' provide a stark contrast to Polkinghorne and Russell's assumption that material transformation must encompass the entire physical universe. If material transformation is *not* universal, then the notion that matter, time and space must be transformed as the context for human resurrection is likewise open to quite different interpretations.

Wright's assessment reveals an emphasis not on transformation, but on 'renewal'. This is more than just a semantic difference. Wright maintains that 'Paul keeps Genesis 1 and 2 in the back of his mind at all times, and… sees the final act of redemption not as a *rescue from* creation, but as the *renewal of* creation' (2003:224). Recalling Beale's exposition of the Eden narrative as the garden-temple from which God's imminent presence would spread outward to encompass the earth, we have a completely different scenario. New creation was in sight from the beginning. The initial creation was good but 'incomplete' (2008:102).[513] It remained to be 'ordered' under the co-creative rule of humanity. Wright regards 'bringing order to God's world' as a key component of the Adamic commission (2008:199). We have already seen in Beale's temple-theology the priestly

[512] In a rare departure, Polkinghorne speculates (2004:152) that 'types' of animals will be present in the new creation or it would be 'an impoverished world', but resurrection would not encompass each individual.
[513] Creation was 'good' (with potential), not 'perfect' (in completion). See esp. Garvey (2019:ch4). Moltmann likewise suggests the 'incompleteness' of original creation, made good not perfect, though his view of completion is far more contingent on a divine act of redemption to new creation (1996:264).

mandate to: 1) 'protect and to serve'; 2) subdue the entire earth and rule over it; and 3) inhabit the world, extending God's glory throughout creation as his image bearers and vice-regents. In this context 'creation' is clearly referring to earth. The intended purpose for Adam and Eve (i.e. humanity) in original creation was not to transform the material of the universe and overcome its transience,[514] but to *order* creation properly toward God. As Beale puts it, 'they were to extend… the garden by transforming the outer chaotic region into a habitable territory' (2004:82). Had they done this, they would have extended the Edenic new creation throughout the old, not as a mighty act of God, but as a gradual *process*.

In this scenario the redemption of creation is interpreted not as redemption *from* transience, death and decay, but as redemption or restoration *of* the original teleological purpose.[515] The scope of this purpose was the earth but with clear cosmic implications – not the cosmology of the physical universe, but the relational cosmology of God (heaven), humanity and the earth. Transformation from creation to new creation is then seen as a restoration of the very *process* cut short by sin and renewed with Christ's resurrection. It has nothing to do with the transformation of matter, let alone the entire universe.[516] The functional and relational nature of Hebrew cosmology implies a cosmic renewal of right relations (righteousness, justice) and functionality (order, purpose). In this sense, Pauline thought equates 'the hope of resurrection' with 'the hope of righteousness' (Wright, 2003:222). The 'newness' of the new creation is the 'renewal' of the *relational* order first established in Eden in the original creation, but in Christ expanded globally to cover the earth – until cosmically consummated with Christ ruling the new cosmic temple 'on earth' no longer constrained by the opposition of the present world order.

A transition of renewal also involves a second aspect. Original creation was not only 'incomplete' but deeply impacted by the effects of sin and the curse. Creation was not

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[514] Eating the produce of the garden implies the transience and death of living things were present in the garden-temple, even if predation was not.

[515] The idea of restoration to original *intent* as opposed to restoration of the original conditions is a concern for Moltmann (1996:264-6). For Moltmann redemption implies the final state and goes well beyond the mere restoration of an original order that has become deranged' (1994:92).

[516] This is based on our prior theological interpretation that 'the fall' directly impacted humanity, and thus indirectly impacted the earth, not the larger universe or creation.

'fallen' but was affected by 'the fall'.[517] These effects did not involve death and transience; they were already present in the 'good' creation (Osborne, 2013:131).[518] The effects were a curtailing of the earth's productive fertility (Gen 3:17-18), a brokenness in the relationship between humanity and the non-human creation (resulting in exploitation, subjugation and fear (Gen 9:2) rather than godly rule), and creation's 'frustration' at the delay in the coming of a new creation which had been so tantalizingly near (Rom 8:19). Rather than bringing 'order' to creation, sinful humanity brought disorder and disharmony. Again, Rom 8:19-21 is seen as a key passage:

> The creation waits in eager expectation for the sons of God to be revealed. For the creation was subjected to frustration… in the hope that the creation itself will be liberated from its bondage to decay and brought into the glorious freedom of the children of God.

Wright interprets Paul's meaning in complete contrast to Polkinghorne:

> [Paul] does not mean, I think, that creation will share the glory; that is not his point. Creation will enjoy the freedom which comes when God's children are glorified – in other words, the liberation which will result from the sovereign rule, under the overlordship of Jesus the Messiah, of all those who are given new, resurrection life by the Spirit. (2003:258)

While Polkinghorne and Wright agree that the resurrection of humanity is in view (Rom 8:23), Polkinghorne insists that all creation (universe) will share in that resurrection; Wright argues that creation (earth and creatures) will experience the freedom of righteousness resulting from humanity's resurrection just as it experienced the frustration and disorder resulting from humanity's sin. Two critical insights arise from Wright's view of renewal. First, humanity's original priestly commission toward creation will be restored and made possible. 'The cosmos will be renewed precisely *through the agency* of those who are thus raised from the dead to share the 'glory', that is, the kingly rule, of the Messiah' (Wright, 2003:258 my italics). Secondly, corporate resurrection takes place *not* in the context of a completed new creation, but (just like Christ's resurrection) in the context of present creation, and as *the means of bringing about the new creation*. The work is not finished, the building of the cosmic temple is not yet complete, but the 'process' of new creation truly begins following the 'event' of resurrection.

[517] See Linzey (1994:85); Garvey asserts that the concept of a 'fallen' creation was virtually unknown or a small minority view through most of Christian history (2019:71). Cf. D. Moo on Rom 8:19-22 in this light (2010:29).

[518] Based on our earlier argument that only humans were affected by 'death' as a spiritual separation.

Moltmann and the Restoration of All Things

Moltmann advocates a Christian eschatology ‘broadened out into cosmic eschatology’ (1996:259), but unlike Polkinghorne, ‘the cosmos’ is not conceived as the universe but as ‘nature’.[519] ‘Unless nature is healed and saved human beings cannot ultimately be healed and saved either, for human beings are natural beings’ (1994:88). Although Moltmann uses cosmic terminology, his concern is not with ‘matter’ but with ‘life’. ‘Resurrection of nature’[520] is the hope ‘not merely for human beings, but for… all cosmic life systems as well’ (1990:258). It encompasses all individual creatures and ‘all flesh’ (2007a:584). Humanity is responsible for the ‘disastrous exploitation’ and the ‘ecological death of the earth’ (1996:90), therefore ‘nature is the scene of grace and the sphere of redemption’ (1994:90). But ‘redemption’ for Moltmann is as discontinuous as Polkinghorne’s. He adopts the same *ex vetere* language (1996:265), but interprets it not as transformation of matter but as ‘the restoration of all things’, meaning ‘everything created in heaven and on earth’, the teleological completion of the original creation and ‘the rebirth of the cosmos to its enduring form’ (2004:151).

For Moltmann, nothing of what God has created can ever be lost or destroyed, but all will be redeemed through its simultaneous existence in ‘eternal time’ (2004:161-2). ‘In ‘the restoration of all things’, all times will return and – transformed and transfigured – will be taken up into the aeon of the new creation’ (1996:294; cf. 1990:302-5). This is no mere metaphor for the memory of things past. Moltmann’s eschatology depicts absolute wholeness:[521]

> What is eschatological is the new creation of all things which were and are and will be. What is eschatological is the bringing back of all things out of their past, and the gathering of them into the kingdom of glory… What is eschatological is that eternity of the new creation which all things in time will experience simultaneously when time ends. God forgets nothing that he has created. Nothing is lost to him. He will restore it all. (1990:303).

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[519] There are exceptions, as Moltmann does occasionally refer to the physical universe (2002a:254), but his consideration of resurrection and redemption remains centred on humanity and nature. Elsewhere he speaks of ‘the planetary system of the earth’ as the ‘*relative* universe’ for human experience (2000a:82). The deteriorating physical universe is meaningless in light of the qualitatively new ‘future world’ to come and the eternal ‘eschatological moment’ (2002a:259-61).
[520] See Moltmann’s exposition (2010:71-3). J. Law summarises his scope of cosmic redemption (2010:235).
[521] To Moltmann, the phrase ‘Behold, I make all things new’ (Rev 21:5) means that nothing passes away or is lost, but that everything is brought back again in new form.’ (1996:265).

Theologians like Conradie are critical of such a radical transition because it compromises 'the goodness of creation' which Moltmann is so eager to preserve. Conradie points out, 'Finitude is not the primary problem… Sin is' (2002:279). But Moltmann sees 'the promise of future consummation built into the initial creation' (1996:264), and like Polkinghorne, his characterization of new creation is strongly panentheistic.[522] 'Everything ends with God's being 'all in all' (1Cor 15:28). *God in the world* and *the world in God*' (1981:105 his italics). Yet within this tremendous scope of redemption and restoration, there is no process involved. Discontinuity prevails, and nature's resurrection is wholly an act of God.

Irreconcilable Differences

The contrast in these three interpretations is remarkable. There is no consonance to be found between the perspectives, their differences are too extreme; they are in fact, irreconcilable. There is no small irony in the recognition that the scientific perspective – as represented by Polkinghorne – paints a picture of dramatic discontinuity, while the biblical perspective – as represented by Wright – is one of optimal continuity. This is quite the opposite of the usual critique against the biblical for being 'otherworldly' in its view of the future, and the scientific for being overly constrained by natural laws and process. Moltmann's view is as discontinuous as Polkinghorne's, albeit for different reasons and with a very different ultimate view of new creation. We might summarise Polkinghorne's view as humanity's resurrection in the context of a transformed-resurrected universe. Wright's view in contrast is humanity's resurrection in the context of present creation – renewed in relationship and function – and in a continuing process of renewal. Moltmann's is the resurrection of humanity in the context of the restoration of all things – and all times – in a simultaneous eternal present. This irreconcilability is entirely correspondent with Polkinghorne's dependence on a scientific cosmology and Wright's on a biblical cosmology. Moltmann's view presumes a vaguely bounded 'nature' cosmology nearer the biblical, but speculation on time and eternity moves him away from Wright to a conclusion of discontinuity akin to Polkinghorne's. As we concluded in the previous chapter, two different cosmologies lead to two different

[522] Moltmann adopts *panentheism* from Jewish and Christian traditions (1981:19) and develops it into a central aspect of his theological perspective (cf.1999b). See Cooper (2006:243ff) on Moltmann's panentheism.

eschatological conclusions. One's initial presumptions regarding 'creation' determine one's conclusions regarding 'new creation'.

Conclusion

Overall, our exploration of corporate eschatology has shown strong agreement regarding Christ's resurrection as both a model for humanity and the inauguration of a corporate new creation in Christ, to be consummated in a corporate resurrection at his return. Complete continuity of identity stands alongside an enigmatic discontinuity of the transformed resurrected body. Process is seen in corporate participation in Christ's present resurrection (metaphorically) and the growth and sanctification through the Spirit, leading to the 'event' of bodily resurrection to new life in the context of a new creation. The present temple inaugurates and anticipates the eschatological temple as the present spiritual experience of resurrection anticipates the future bodily resurrection.[523] But disagreement emerges in the extent to which Christ's resurrection is a model for a similar transformation from creation to new creation. All agree theologically that present creation is of great value and will not be destroyed – supported by the biblical evidence – but Polkinghorne, Moltmann and Wright interpret very differently the nature of the transition and the extent of discontinuity involved.

Those who align with Polkinghorne's approach – equating 'creation' with the whole universe – are understandably dismissive of theological proposals adhering to either anthropocentric or earth-centric views of new creation. Wilkinson (2010:109) finds unacceptable any suggestion of a transformed earth remaining within an otherwise unchanged Universe; it would not solve the problem of the earth's vulnerability to potential cosmic cataclysms nor the problem of the ultimate futility of the universe. Like Polkinghorne and Russell he maintains, 'Any transformation of life on Earth must be closely linked with a transformation of the whole Universe' (Wilkinson, 2010:109; cf. 2009b:22). This critique is certainly justified. But if in fact the biblical creation account is *not* an account of material creation or the physical universe, then neither can 'new creation' be conceived in those terms. The universe has no *need* of redemption if it is not directly involved in the relationally structured 'cosmic-temple' nor the disruption of those relationships due to sin and rebellion.

[523] Beale overtly links the inauguration of the eschatological temple with Christ's resurrection (2004:137).

Those who align with Wright's view of continuity represent a growing body of recent scholarship which – against an apocalyptic outlook – advocates the ontological value of present creation maintained through a process of renewal and transformation into new creation, rather than through divine event.[524] (This does not deny the event of human resurrection *within* that process.) This view can be traced back as far as Irenaeus (2nd C.):

> It is not the substance or essence of creation that is brought to an end (for he who established it is true and constant) but 'the fashion of this world passeth away', that is, those aspects in which transgression has been committed. (in McKeown:1998).[525]

The question posed by Holmes Rolston, 'Does nature need to be redeemed?' (1994), is certainly crucial, but is entirely dependent on what is meant by both 'nature' and 'redemption'. Is nature understood as 'life on earth' or 'the material universe'? Does redemption imply resurrection or renewal? The critical question of which view is most plausible can only now be determined when each is examined within the broader framework of earlier issues already explored and resolved between the three perspectives, the task of our concluding chapter.

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[524] This recent scholarship refers to the explosive growth in ecotheology and Christian environmentalism which will be considered further in the following chapter.
[525] From *Against Heresies,* Book V: Ch. 36.

Chapter 9
Critique and Conclusions

'I am making everything new!'
Rev 21:5

Introduction

This research has attempted to peer into the future. The aim was to determine the most plausible future scenario for humanity and the earth by joining together the insights of science, theology and the bible, allowing each to critique the others in an attempt to find as much consonance as possible, and hopefully arrive at a resolution satisfactory to all. The challenge was not only to assess the key topics independently, but to determine how each topic could fit together into the broader framework of the whole theological narrative of present to future, creation to new creation. The key concern has been to discover the level of continuity and discontinuity involved – and to determine a balance that might equally accommodate the scientific, biblical and theological perspectives – recognising the valuable role of discontinuity while doing justice to the theological unity of God's creation. What remains now is to join together the areas of agreement, critique the most critical areas of disagreement, and attempt to find a resolution portraying a future scenario which reflects the insights of each perspective with equal integrity. With regard to that resolution, we will then suggest some key implications for Christian theology and mission within the context of the present ecological crisis facing the planet.

Consensus and Discord in the Overall Narrative

Within the larger narrative, we have found individual eschatology to be an aspect of corporate eschatology, while corporate eschatology involves both humanity and the earth, or rather, humanity *in the context of* the earth. Yet the earth itself lies within a broader context – biblically that context is 'heaven and earth' or 'creation'; scientifically that context is the physical universe. The term 'creation' itself must be carefully delineated since there is no question that the universe is as much God's creation as is 'heaven and earth'. But as we have also seen, the Hebrew understanding is not of material creation at all, but of a functional and relational dynamic put in order by God and involving humanity in a unique way. The question then is which is the intended referent of 'creation'? The key point of discord becomes the theological scope of creation – and by implication the scope of new creation.

To reiterate the areas of agreement around individual and corporate human eschatology, we first recall that the theological consequence of sin was 'separation from God'; this was the meaning of spiritual death. Physical death was part of God's good creation and a necessary aspect of evolutionary process, not the result Adam and Eve's sin. (Whether 'not sinning' would have prevented their own physical death is a matter of conjecture). But for humanity, physical death marked a transition – not to 'heaven' but to an 'intermediate state'. While Moltmann, Polkinghorne and Wright each view the intermediate state differently, all agree it must encompass the whole 'person' – not an immaterial 'soul' awaiting reunification with a body. Continuity of personhood and identity persists through the discontinuity of death. Despite disparate views regarding the fate of the wicked in *sheol* or *hades*, for those redeemed from the separation of death, the intermediate state takes on a new meaning of being united 'with Christ' in paradise – or 'held in the mind of God' in Polkinghorne's words – while still awaiting the full redemption of the body through resurrection. Resurrection then is the final state, not in paradise or 'heaven', but in the new creation; not in the same natural physical body – the *soma psychikon* – but the *soma pneumatikon*, a body enlivened by the Spirit of Christ.

Resurrection is an act of God's power, overcoming death with new life, an act foreshadowed, modelled, and made possible only through Christ's resurrection, denying any notion of immortality in favour of eternal life. Eternal life is not 'eternity'; it is 'life in the age to come', being connected to the source of life, sustained by the Spirit of God. It is also an expression of kenotic love for those whom God created (Polkinghorne, 2001c:90-1). For Moltmann, this is enough to ensure complete inclusivity; all will be redeemed. Polkinghorne is ambivalent about the fate of those who die estranged from God and choose to remain so,[526] while Wright suggests those in *sheol* become less than human, 'no longer reflecting their maker' (2008:183). Conditional immortality suggests 'ceasing to exist' when the intermediate state is ended at final judgement (Rev 20:14). This disagreement is of minor importance for our purposes. More significant is the consensus that resurrection, while a future *event*, is also a present *process* of transformation and sanctification. All those 'in Christ' participate metaphorically – through spiritual union – in Christ's resurrection, symbolised in baptism, while the social dimensions of transformation continue even after corporate resurrection. Thus

[526] Polkinghorne speculates on judgement as a 'purgatorial process' (2002a:130-31), but is inconclusive, and like Moltmann, holds the possibility of post-mortem salvation.

resurrection is both an internal transformational process *and* a bodily transformational event, requiring and enabling a social dimension of reconciliation and healing, all rooted solely in the person of Christ.

To this point, we find a striking level of consensus amongst the three representative voices with only minor areas of contention. However, when we turn to the *context* of corporate resurrection, along with irreconcilable accounts of *how* that context itself is transformed into one suitable for resurrected life, we find a striking level of discord. Any hope of identifying the most plausible account will rely on a deeper critique of each view to determine how they withstand critical evaluation from the other perspectives, as well as how well they hold together a coherent theological and teleological narrative of the whole picture of creation to new creation.

Critique of Contextual Transition Accounts

Critique of Moltmann's Account

Of the three alternatives, Moltmann's is the least plausible. His desire for the restoration of *all* things, while laudable in the emphatic value placed on all God's creation, is too universally inclusive to be conceivable and makes no attempt to adhere to a critical realist framework. It relies on the notion that transience and death are aspects of the incompleteness (or imperfection) of the original creation (1996:91; 1968a:111);[527] therefore resurrection is the necessary completion and fulfilment of every life that has ever lived. Such was God's intention from the beginning. Moltmann helpfully (though somewhat ambiguously), perceives the scope of redemption to be the '*relative* universe' of human experience, rather than the material universe of scientific cosmology (2000a:82). By this he means 'the earth system' or simply 'nature'. But within this system, 'resurrection has become the universal 'law' of creation, not merely for human beings, but for animals, plants, stones and all cosmic life systems as well' (1990:258).

Polkinghorne is rightly critical, suggesting that 'the eschaton is in danger of becoming a museum collection of all that has ever been. It is hard to believe that individual stones as

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[527] Although Moltmann takes this to an extreme by individualising the problem of creaturely death, Polkinghorne and many others agree that death will *not* be part of the new creation (Rev 21:5), giving a biblical basis to a view which otherwise seems to contradict the goodness of original creation in which death was a 'natural' part. This problem will be critiqued under Polkinghorne's arguments.

such either have or need an ultimate destiny' (2002a:123). Polkinghorne may be unfair to pick out 'stones', while he, at the other extreme, fails to concede *any* individual life forms transmuted from present to new creation apart from humans. Yet it is impossible to conceive how all life that has ever lived could fit into the 'earth system' of new creation in a realistic conception of space and time – or why it needs to. We have already rejected Moltmann's hypothesis of an 'eschatological moment' in which all times exist simultaneously. It seems impossible once again to conceive of billions of years of life on earth resurrected to a simultaneous existence – perhaps within billions of intersecting layers of earth 'space'? Despite the insurmountable problems of such a universal inclusion, the underlying idea that present creation will be 'resurrected' is a valid possibility asserted by Polkinghorne as well, to be critiqued in his account. The intensity of Moltmann's determination to preserve and restore creation is a much-needed counterbalance to a common theological anthropocentrism which sees the earth as merely a backdrop for humanity's resurrection.

Critique of Polkinghorne's Account

Polkinghorne's account is a much more coherent attempt to find consonance between scientific and theological assertions in adherence to critical realist principles and requires a more substantial and detailed critique. Nevertheless, there are significant problems, including the lack of a comprehensive biblical perspective which results in an inconsistent hermeneutic approach. Polkinghorne represents a modest consensus within the science-theology dialogue – perhaps because no other alternative sufficiently addresses the key scientific concerns. Problems in Polkinghorne's account will be addressed under five categories: 1) futility; 2) hermeneutical inconsistency; 3) process; 4) death; 5) eternity and time.

A) Futility

Polkinghorne regards eschatology as 'the edifice of theological thinking, holding the whole building together' (2002a:140). The key eschatological dilemma for scientific theology is the 'futility of the universe', the recognition that the universe is deteriorating, winding down to a cold and lifeless heat death, an observation which flies in the face of a biblical eschatology portraying eternal life in a new creation. How to reconcile the two is an essential project of the science-theology discourse. Within this context, any theology

which does not sufficiently incorporate a concern for the universe as a whole is naturally regarded as too limited to be relevant to the discussion.[528] The singular way to approach this dilemma is to broaden the scope of 'creation' in the Bible to entail the creation of the universe, thereby enabling 'new creation' to provide a solution to the problem of deterioration, and 'eternity' to provide a solution to the problem of transience – if only a credible means of transition can be delineated. The result is that the scientific cosmology of the physical universe (i.e. material creation) is overlaid on the biblical cosmology of 'heaven and earth' (i.e. relational creation), overwhelming the latter and changing its meaning, an issue to which we return shortly.

B) Hermeneutical Inconsistency

A major weakness of Polkinghorne's proposal of universal transformation is its heavy reliance on a particular interpretation of one biblical passage (albeit a highly significant one):

> The creation waits in eager expectation for the sons of God to be revealed. For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the glorious freedom of the children of God. (Rom 8:19-21).

As earlier pointed out, Polkinghorne interprets 'decay' in light of the scientific understanding of the deterioration of a universe subject to the second law of thermodynamics. It is highly unlikely this is what Paul had in mind by 'decay'. No doubt there was a first century awareness that things decay, grow old and die, but there was no concept of the entropy of matter and energy, nor the 'decay' of the universe. In light of Paul's reference to 'frustration', Moo writes, 'the word probably denotes the "frustration" occasioned by creation's being unable to attain the ends for which it was made' (1996:515). This was related to humanity's sin.[529] Moo notes Paul's obvious reference to the Gen 3 narrative and the Fall. 'Creation, helplessly enslaved to the decay that rules this world after the Fall, exists in the hope that it will be set free' (1996:515).

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[528] This is perceived in several ways: as scientifically naïve, overly anthropocentric, or overly earth-centric, but reflects the failure of much of theology to engage deeply with scientific insights regarding physical cosmology, let alone seeking consonance within a critical-realist undertaking.

[529] Such 'longing' does not demonstrate a hopelessness for the present creation, but the intense desire to see creation relieved from the suffering caused by human sin. (D. Russell, 1996:131).

Polkinghorne's interpretation is only feasible if 'the one who subjected it' is interpreted as God enslaving the initial creation to a process of decay – but there is no such intimation in the creation account, and Paul could not have had this in mind.[530] Crucially, Polkinghorne fails to account for the significance of the first clause of the text, 'the creation waits in eager expectation for the sons of God to be revealed', or its conclusion (v.18), both of which tie creation's freedom from bondage directly to the 'sons of God' being revealed (i.e. the resurrection of those in Christ). If the transformation of the universe is solely a divine act altering matter, time, and space, it has no connection to humanity, and the 'eager expectation' is meaningless. But a relational creation account, where 'decay' refers to the fractured relationships between humanity and the earth as a result of humanity's sin, as well as nature's continued exploitation and subjugation to an unredeemed humanity, renders this Pauline connection deeply significant.

All of this merely reflects the broader hermeneutical inconsistency regarding the meaning of creation itself. In theological terms, Polkinghorne is willing to discuss 'heaven and earth' as a biblical concept, interpreting heaven as 'the outward completion of the earth, in the direction of the open and the unknown' (1994a:80). Further, Polkinghorne's concern is *always* for process.[531] 'The concept of heaven and earth is intimately connected with the concept of *creatio continua*: for theology, 'heaven and earth' are… two sides of a divine creative activity' (1994a:81).[532] Yet in discussing creation *apart* from 'heaven and earth', Polkinghorne uniformly broadens the concept to the *universe* as God's creation (2004:146). This may be theologically possible, but fails to address the fact that nothing whatsoever in the Genesis creation account of 'heaven and earth' indicates the universe, nor did the Hebrews have any concept of a universe beyond the visible cosmos. Theirs is an earth-centred account, and 'heaven' did not refer to the universe. Theology must deal with both cosmologies, but they are not the same. The 'creative activity' in the biblical account is not the evolutionary unfolding of a fruitful universe, but the construction of a relational hierarchy and a functional ordering of purpose. This hermeneutical inconsistency is dramatically expanded when Polkinghorne

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[530] Moo (1996:515-6) notes the three most common interpretations of 'the one who subjected it' being 1) Adam (due to sin and the curse), 2) Satan (whose temptation led to the fall), and God (who decreed the curse as judgement on sin). None of these relate to a state of decay in the initial creation account itself. Rather, as Moo points out, the 'hope' referred to is likely the future promise given in relation to the curse.
[531] This is a recurring theme in all Polkinghorne's writings and even provides a rationale as to why God did not simply make the original creation in the final form of the new – because process was vital (1991:102).
[532] Polkinghorne in the second clause references Moltmann (1985:164).

then interprets 'new creation' as a transformed *universe*, rather than a transformed relationship between heaven and earth.

C) Process

Polkinghorne's prevalent concern for *process* is upended by the radical discontinuity of his proposed transition from old to new. The solution of a divine *ex vetere* event, transforming space, time and matter, is given theological credibility through its alignment with Christ's resurrection (and that of humanity), but completely contradicts the scientific understanding of the unfolding, evolutionary continuity of the space-time universe:

> The old creation has its own fruitfulness and brings about its own possibilities. Yet it must be delivered from the frustration of its impending mortality, just as Jesus was delivered from the bonds of death by his resurrection. In each case a great act of God is called for, but an act which must be the fitting fulfilment of what has gone before, not its arbitrary abolition. (Polkinghorne, 1994a:169).

Polkinghorne appeals to science's view of the 'impending mortality' of the universe – even though billions of years in the future and unknown to the biblical writers – as the rationale for God's great act of resurrection. Ironically the resurrection of the universe thus precedes its actual death, such that 'death' transfers in meaning to describe the 'end' of the old creation brought about by God himself. Polkinghorne sees *ex vetere* as 'the attempt to do justice both to the God of process and to the God of hope' (1994a:169). Yet the discontinuity seems extreme and all encompassing, with only a tenuous link to the original creation as 'the raw material from which the new will come' (1994a:168).

D) Death

Separately from the 'death of the universe', Polkinghorne's view of both human and creaturely death is problematic. On the basis of an evolutionary creation, he repudiates the view that physical death was caused by human sin, seeing death as 'the necessary cost of life' (2000a:39) and a natural process of present creation. Even for human beings, the Fall was not the cause of *physical* death, but rather added 'a spiritual dimension of mortality' (2002a:126). Why then does Polkinghorne interpret 'no more death' in the new creation as applying to *all* physical life rather than human life alone? 'There will be no more death or mourning or crying or pain, for the old order of things has passed away' (Rev 21:4). The answer lies in the radical discontinuity of his proposal. Death, transience and finitude must be universally abolished because the evolutionary processes

of the old creation will no longer be present in the new. This is the ‘old order’ passing away. Polkinghorne interprets Rev 21:4 as: ‘In language appropriate to their times, these verses are expressing a hope extended beyond humanity to assume universal proportions’ (1991:101). He is not then relating ‘no more death’ in 21:4 to a reversal of death in Gen 3:19, but to overturning the transience and evolutionary processes woven into the fabric of the present creation.

It seems strange for one who so deeply values the innate process of creation to assert the ending of creative process, not only in the transition event, but in new creation itself. But this is the cost of life without death. To apply his view to *new* creation: without death, there can be no new life. In a world filled with life, a new tree cannot grow if an old tree cannot die. There is no space for newness, nor for change, and new creation appears static. Schloss remarks that death is necessary in the animal world for both reproduction and food consumption:

> Death is neither physiologically nor evolutionarily necessary, [but] it is necessary if a habitat has finite resources and populations are reproductively increasing without emigration… It is also necessary for predators and parasitoids to obtain food at all, since by definition they kill their food’ (2002:83).

Schloss also points out that mortality is the bi-product of environmental competition in a bounded environment. Polkinghorne has not suggested, like Moltmann, that the new earth becomes unbounded space; so either death is necessary, or new creation must be a non-reproductive environment with no food consumption – plant or animal. We are treading into highly speculative territory here, but the point of this critique is simply that a world without death has far more challenging implications than Polkinghorne’s scheme has dealt with.

Polkinghorne is far from alone in interpreting Rev 21:4 as the end of all death, and within his own transitional view this is coherent and consistent. Yet disconnecting Rev 21:4 from Gen 3:19 and 2:18 (‘when you eat of it you will surely die’) and interpreting the end of ‘death’ in the far broader terms of natural processes, surely requires a stronger hermeneutical justification. Humanity needs redemption and resurrection to overcome sin and attain eternal life, restoring humanity to God’s original intentions. But the hermeneutical leap of applying ‘redemption from death’ to all of non-human creation (1991:103), thus granting it the same ‘imperishability’, is speculative and unfounded.

E) Eternity and Time

Polkinghorne's view of both present and new creation is thoroughly temporal, demonstrated in his staunch advocacy of 'flowing time' and his narrative portrayal of the universe's history and 'directionality'. Nevertheless, in his account of transition from old to new, time – like matter and space – is also transformed (2002a:117). In a similar attempt to preserve continuity he explains:

> Because modern physical understanding associates matter and spacetime intimately with each other, it is a [sic] natural to suppose that the 'time' of the new creation bears some sequential relationship to the time of the old – it comes 'after' or 'beyond' that transformation of matter into 'matter'. (Polkinghorne, 1994a:170).

Polkinghorne maintains that temporality is intrinsic to embodiment, yet without death or evolutionary process, his notion of temporality becomes anthropocentric and somewhat incongruous with the static portrayal of non-human life. Life in the new creation will 'doubtless be everlasting', and will involve 'the endless, dynamic exploration of the inexhaustible riches of the divine nature' (1994a:170). While this renewed temporality is consistent with his overall scheme, it raises questions: what is actually different about the time of the new creation? Is time itself transformed (whatever that means) or is it merely experienced differently? While matter is transformed imperishable, time continues to flow, albeit everlastingly. How then is time transformed, and to what end?

In the final appraisal, Polkinghorne's account is a coherent and carefully constructed theological resolution of the problem of the deterioration and futility of the universe but fails to address key biblical issues. Modelled on Christ's resurrection, the transformation of the universe, no less than 'a radical refashioning of the very foundations of the cosmos as we know it' (Bauckham and Hart, 1999:69-70), brings about imperishability and permanence, overturning the natural laws of entropy and decay, and establishing a permanent and everlasting universe. Yet the questionable hermeneutical leaps, conceptual challenges around a world with no death, and the troubling implications of the end of natural processes, all mitigate against his view. Biblically Polkinghorne's account equates 'creation' with 'universe' but fails to address the meaning of John's enigmatic portrayal of 'new creation' in Rev 21-22 or to attempt to relate John's description to the transformed physical universe. Ironically, the radical discontinuity of the event, and the

abolition of evolutionary process, makes this solution objectionable to science as well.[533] This may be of little consequence in the search for truth, but in terms of plausibility, the failure to address key biblical concerns *and* the abandonment of the core scientific view of nature's continuity deeply diminishes the plausibility of this theological resolution.

Critique of Wright's Account

Of the three, Wright's account is the only one to maintain true continuity between the contexts of creation and new creation. There is no presumption of transmutation of matter nor a change in the laws of nature nor the space-time universe. Wright may be faulted for not dealing with these ideas, but his account of continuity does not require it. Human resurrection is an exceptional element of discontinuity within a broader context of continuity. Wright's transition is focussed on the problem intrinsic to the biblical 'heaven and earth' creation, the problem of sin and evil. Like Polkinghorne and Moltmann, Wright sees original creation as 'good *but incomplete*' (2008:102); in contrast, Wright's 'completion' does not involve overturning transience and decay. For Wright, these are aspects of God's good creation. What must be overturned is the element of evil which entered into creation 'in the beginning' and which must therefore be defeated and excised for creation to be renewed, healed and made whole. Wright carefully defines evil not as something created, nor as a material aspect of creation:

> Nor – and this is crucial – does evil consist in being transient, made to decay. There is nothing wrong with the tree dropping its leaves in the autumn. There is nothing wrong with the sunset fading away into darkness. Evil consists in none of those things; indeed, it is precisely the transience of the good creation that serves as a pointer to its larger purpose. Creation was good, but it always had a forward look. Transience acts as a God-given signpost pointing not from the material world to a non-material world but from the world *as it is* to the world *as it is meant one day to be.* (Wright, 2008:94-5).

For Wright then, it is not material change, but a moral, relational transformation which defines the difference between creation and new creation. Redemption can then be described as 'liberating what has come to be enslaved' (2008:96) – and here we see how Wright's interpretation of Rom 8:19-21 contrasts with Polkinghorne's.[534] This does not mean that Wright sees transition as only process with no new creation 'event'. This

[533] As a scientific theory for example, Peters poses the question: 'how can we speculatively preconstruct what new laws of nature the eschatological resurrection would require?' (2006:151).
[534] Sollereder's exegesis of Rom 8 provides superb biblical support to Wright's interpretation, identifying within the prophetic tradition the motif of 'the earth going into mourning'. She describes this as 'the dysfunction of the earth as a direct result of human sinfulness' (2019:31).

redemption from sin and evil cannot take place without the 'event' of Christ's coming, his defeat of all the forces of rebellion, and the resurrection of humanity. Through the 'event' of removing sin and evil, a redeemed humanity is free to liberate creation from its bondage to decay – the fractured relationships brought about by human sin – and to fully embrace its original commission of ruling, but now in righteousness. This account clarifies the link to temple theology. If Adam and Eve's original commission was itself a 'creation to new creation' mandate through the outward expansion of Eden (as Beale proposes), clearly this did not involve a material transformation of the earth, but a 'completion' of the cosmic temple relationships between God, humanity, and earth.

Wright's account is the most plausible in several ways. Biblically, it factors in the events of Revelation and 'the end of the age' in a way the others do not, recognising the central importance of the defeat of the forces of sin and rebellion concurrent with Christ's return, and the establishment of his kingly reign. These become absolutely necessary *precursors* to a transformed earth and non-human creation, not simply coincidental events. Wright also provides a thorough exposition of John's vision of a new heaven and new earth, the 'new Jerusalem' (Rev 21-22), providing an interpretation fully integrated with temple theology, to which we turn shortly. Scientifically, Wright's account is the most conciliatory, with no challenge to continuity or the laws of nature, and an 'end of the age' view that does not constitute the end of present time or space.[535] Nevertheless, Wright sees in Paul's metaphor of birth an element of discontinuity, 'not the unmaking of creation or simply its steady development but the drastic and dramatic birth of new creation from the womb of the old' (2008:104).

What Wright's account does *not* do however, is provide any solution to a scientific eschatology regarding the end of the universe.[536] This does not lessen its plausibility, but merely reveals that biblical new creation is not the theological resolution to this problem. Additionally, by not incorporating a material transformation, Wright's account implies that the resurrection of humanity takes place *within* the context of present creation, conflicting directly with Polkinghorne's premise that 'eternal life requires eternal matter'. This maintains a distinct dissimilarity between the materially transformed humanity (resurrected) and the non-materially transformed creation (redeemed relationally). While

[535] His relative silence on scientific concerns may simply reflect a desire to avoid speculating beyond the confines of his disciplinary expertise, yet the stark continuity of his proposal conforms well with science.
[536] This will be addressed later in this chapter.

Polkinghorne sees this intermingling of creation-new creation as a significant dilemma – even for the short time Jesus spent on earth in his resurrected body[537] – Wright makes no attempt to deal with this scientifically but relies on the anomaly of the resurrected Jesus living perfectly well in the present creation for 40 days, breathing its air and eating its food. Comparing these critiques, we are able to conclude that Wright's account, with its much stronger level of continuity, is the most plausible explanation biblically, theologically, and even scientifically.

Summary of Eschatological Models within the Christian Narrative

This research began with the assertion that Christian theology maintains several conflicting worldview narratives regarding the future, that such division causes profound uncertainty, and that the lack of consensus prevents a unified and robust Christian response to the ecological crisis facing the world today. We can now identify five distinct eschatological perspectives or 'models', although each of these has several distinct variations:

1) *Eternity-in-heaven* model – individuals die and spend eternity in heaven
2) *Destruction-recreation model* – an apocalyptic end to the world, followed by a new creation
3) *Progressive new creation* model – new creation is already here in Christ; present creation progressively becomes new creation through the advance of the gospel
4) *Transformation-as-event* model – new creation occurs through a divine transformational event impacting both humanity and the earth
5) *Transformation-renewal* model – new creation occurs as a divine transformational event for humanity initiating a gradual renewal of relationship with the earth

The first was rejected on biblical and theological grounds in chapter 3, although commonly held as the 'default' position of many Christians. The second, particularly strong in dispensational and conservative evangelical theology, was rejected mainly on hermeneutical grounds, although its less extreme variations fit well within the fourth model. The third was accepted in part as a spiritual or metaphorical component of new creation in the present, but rejected for its insufficiency in ultimately resolving the problem of sin and evil. Human transformation ultimately entails a resurrection event,

[537] Polkinghorne poses the question, 'Did the risen Christ breathe?' (2005a:172). Polkinghorne discusses the problem of an 'exchange of matter' between the two creations, rather reluctantly proposing by way of resolution, 'The two creations might sometimes actually intersect, their two times briefly coinciding' (2005a:172). Also (2002a:120-1).

and all three interlocutors rejected a purely evolutionary view of new creation.[538] The fourth model, represented by Polkinghorne and Moltmann in different variations, was rejected for a too-radical discontinuity with present creation and the many problematic, unresolved implications for a critical-realist view of new creation. Polkinghorne's view, while coherent, resulted in a much less plausible picture than the fifth view. The fifth, represented by Wright, was found to be the most biblically, theologically and scientifically credible, despite its failure to extend to the problem of the physical universe. As perhaps the least known within Christian and congregational theology, it is important now to relate this transformation-renewal model more directly to the biblical descriptions of 'new heaven and new earth' and temple theology, to situate it within a full Christian narrative context, and examine its implications for Christian theology and mission today.

A New Heaven and New Earth

Our study to this point has been looking *toward* a new heaven and new earth, examining the various perspectives and proposals of *transition* from present to new creation. Having determined a *transformation-renewal* model as the most plausible within the combined perspectives, the task is now to examine the meaning of the 'new heaven and new earth' itself in light of this transition. The model chosen maintains the greatest level of continuity for the earth and non-human creation, in stark contrast to both 'end-of-the-world' apocalyptic views and the *ex vetere* concept which carries such weight in the science-theology dialogue. However, I would argue this very continuity enables the scientific perspective to feature far more strongly in relation to what it would otherwise view as merely idealistic biblical symbolism or otherworldly theological speculation. This study has been framed as a search for truth, and the biblical picture, whatever metaphorical language used, must reflect a realistic future reality for both humanity *and* this earth.

Transformation-Renewal in Temple Theology

Recalling the temple-theology of chapter 7, in simplest terms a 'temple' is the meeting place of God, humans, and the earth. In the initial creation account the concept of the cosmic temple is seen in the formation of the deity-humanity-creation relationships, and in the hierarchy, order, function and purpose of those relationships operating

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[538] Moltmann (1990:301-3), Polkinghorne (2004:148-9), Wright (2008:97).

harmoniously according to God's teleological design. Although given a special role, humanity is of the earth,[539] and the phrase 'heaven and earth' is another way of referring conceptually to the cosmic temple. The concept is brought to human scale and made tangible through the Eden-temple, the meeting place between God, his human representatives, and the garden, where the garden formed an integral part of this relationship.[540] The God-human relationship was unimpeded in the temple-garden, and the relationship between humanity and the earth made explicit. Humanity was made not only *of* the earth but *for* the earth (Gen 1:28, 2:15), to tend the garden, fill and subdue the earth, and rule over its creatures. Sin threw all of these relational aspects into disarray. The God-human relationship was broken, resulting in shame, separation and death. The humanity-creation relationship became disjointed; humanity was 'dislocated' from its place and role in the garden, and the commission to 'rule' became dysfunctional and exploitative.

All of this remains unresolved until Jesus appears. As fully God and fully man Jesus becomes, within himself, the meeting place of God and humanity; he becomes the *true Temple*. This is no mere afterthought, for 'by him and for him all things were created' (Col 1:16). As Clowney states, 'It is not so much that Christ fulfils what the temple means; rather Christ is the meaning for which the temple existed' (1972:177). Jesus' resurrection inaugurates the new temple, the new creation, new age; but the Jesus-temple is a living, dynamic, participatory temple. Humans are invited to enter through the cross and be joined together in Christ as 'living stones', expanding the temple numerically and geographically, humanity re-united with God. Yet one integral component is missing: the earth. While humanity's shame, separation and death is transformed by the cross, creation remains 'frustrated', waiting for 'the sons of God to be revealed' (Rom 8:19).

Our contention here is that the 'renewal of the earth' cannot take place until the context of the present world system is overturned. With the coming of Christ, two processes are at work: the beginning of the end of the old creation, and the beginning of the preparation for the new creation.[541] Both are present processes – in mortal conflict – which will

[539] Bookless notes, 'As physical beings we need to be 'earthed', 'rooted', and 'grounded' or we become 'dislocated', 'uprooted' and 'displaced' (2008:50).
[540] Referencing the Hebrew literary relationship between man (*adam*) and ground (*adamah*), Brown calls Adam 'the groundling in the garden' (2010:80).
[541] By 'preparation' is meant the metaphorical participation of human beings in Christ's resurrection, and their ongoing sanctification in preparation for bodily resurrection. This is the first stage of a two-stage process, where those in Christ *now* are proleptically identified as 'new creations' (2Cor 5:17).

culminate in a great event. The old ends in judgement – the 'Day of the Lord'. The preparation of the new gives way to its full reality in the *parousia* of Christ, the resurrection of his people, and the coming of the New Jerusalem from heaven. The context of this world will be utterly changed. The combination of the end of sin and evil together with the resurrection of a redeemed humanity and the establishment of his Kingdom, makes possible the renewal of creation, through the fulfilment of humanity's commission.

Clearly Christ is the epicentre of *all* these events, and the lynchpin between old and new. Because Jesus himself *is* the temple, the locus of the cosmic temple and his rule is presently in heaven, mediated to his people on earth through the Spirit.[542] As Beale states:

> Christ is the priest-king whose resurrection was the beginning of the latter-day temple and whose ascent into heaven meant that the temple's centre of gravity had shifted from earth to heaven, and would remain there during the present age. (2004:299).

But in the new creation, his *parousia* will transfer that locus to earth, and his kingdom and reign will literally be established 'on earth as it is in heaven' (Mt 6:10). The *transformation* of his people takes place through resurrection, and the *renewal* of the earth begins. How then does Jesus' coming relate to John's vision of the New Jerusalem coming down out of heaven?

New Jerusalem and the New Heaven and New Earth

The iconic vision of the New Jerusalem (Rev 21-22) has dominated descriptions of heaven throughout centuries of Christian thought, yet it must now be crystal clear that this is no vision of heaven, but of a temple: a new temple, configured as a garden-city. John's vision of 'a new heaven and a new earth' (21:1) is immediately transfigured to 'the holy city, the new Jerusalem, coming down out of heaven from God' (21:2). Just as 'heaven and earth' is cosmic temple language, so a 'new heaven and new earth' indicates a *relationally new* cosmic temple, including a redeemed humanity in Christ.[543] And just as the Eden-temple was its human-scale representation on earth, so the 'new Jerusalem' is the human-scale temple re-established on earth in dramatically revived form. John's

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[542] Somewhat confusingly, Christ, in his kingly-priestly roles as a human being, serves *in* the temple as well as *being* the temple in a relational sense (Heb 8:1-6, 9:11-12).

[543] This is indicated by the next clause, 'prepared as a bride beautifully dressed for her husband' (Rev 21:2).

visionary language captures this in two quite distinct ways: a) a description reminiscent of the original components of the Edenic garden expanded into a city (22:1-5);[544] b) a symbolic temple *structure* corresponding to Israel's architectural predecessors (and particularly to Ezekiel's idealised eschatological temple), but enormously expanded and perfected.

The re-establishment of Edenic imagery, and 'garden-within-the-city' motif has been vividly expressed by scholars through the centuries but rarely in connection with the temple concept.[545] The tree of life (now bearing twelve crops of fruits) and the Edenic river reappear, the curse now lifted (22:3). Most importantly the dwelling of God is once again with his people, with no barrier or impediment, and they serve him faithfully (22:3-4). Some suggest this as a portrayal of 'paradise' (Lk 23:43) in the intermediate state (Wright, 2008:171).[546] While this is certainly credible, the point of the imagery is to depict a renewed temple, reflecting the Edenic original. Likewise in the *structural* depiction (21:10-27), the city itself can only be understood symbolically as a temple description, particularly in its cubic dimensions (21:16) reflecting the holy of holies, its location on a mountain (21:10), the 'measuring activity' (21:15),[547] predominance of the precious stones and gold (21:19-21),[548] gates and walls (21:12-14), and numerous allusions to the architectural features of the OT temples.[549] Mathewson notes 'the transference of *temple* imagery to the *city*' (2003:103), thus the entire picture creates the inescapable conclusion that new Jerusalem is in fact a 'city-temple' (Beale, 2004:24).

Most importantly, the city-temple symbolically depicts the greater reality of the *relational* temple comprised of Christ and his people. The twelve gates and twelve foundations represent the twelve tribes of Israel and the twelve apostles (21:12,14). More emphatically, the entire vision depicts 'the bride, the wife of the lamb' (21:9).[550] While its portrayal here is a 'city', the bride has already been revealed and the wedding is about

[544] The language also alludes directly to the eschatological descriptions in Eze 47:1-12 and Isa 60:19 (Mathewson, 2003:186-8), also Wright (2011:199-201)
[545] See Mathewson (2003:ch7) for an excellent analysis of the garden's imagery restored in the New Jerusalem without allusion to the temple. Cf. McGrath (2003), McDannell and Lang (1988).
[546] Wright posits this interpretation as the 'hidden reality' for God's people after death in line with Col 3:3 (2011:188-9). Cf. Gooder's discussion of paradise (2011:74-5).
[547] This is another allusion to Ezekiel's temple vision (40:3-5). Beale (1999:1072). Cf. (Zec 2:1-5).
[548] See Mathewson's analysis of precious stones (2003:ch5) and Beale (1999:1080-5).
[549] Mathewson (2003) and Beale (1999, 2004) both give detailed analysis of the new Jerusalem's correspondence to the OT temple structures, and particularly to Ezekiel's idealised temple (Eze 40-48). Cf. Turner (1992).
[550] This is implied at the vision's opening (Rev 21:3). Cf. Isa 62:4-5.

to commence (Rev 19:7-9). The language of 'bride', 'wedding' and especially 'Jerusalem' – is rich with symbolic meaning deeply rooted in OT thought, associated with the people of God.[551] As Carson writes, 'the city becomes the focal point of the existence of *all the redeemed* in the new heaven and new earth' (2001:629 my italics). The symbolism of marriage is a third strand of metaphor alongside the garden and city, which Wright sees as particularly important for the temple (2008:104ff), as it represents not only the union of Christ and redeemed humanity, but the 'marriage' of heaven and earth, God dwelling directly with his people (Rev 21:3). 'The dwelling of God will be with his human creatures… and heaven and earth will finally be united' (Wright, 2000b:38). Jones calls this 'the earthing of heaven' (2003:60). For this reason, after all the temple description, John can claim, 'I did not see a temple in the city because the Lord God Almighty and the Lamb are its temple' (21:22).

I suggest then that John's vision of the new Jerusalem 'coming down out of heaven from God' is the 'temple-interpretation' of Jesus coming from heaven to earth with his saints to rule (Rev 19:11-14). In this *parousia* event, Christ is depicted as the conquering saviour on a white horse, with the 'armies of heaven' following him 'dressed in fine linen, white and clean' (19:14). This is the exact description of the clothing of his 'bride' in (19:8).[552] In defeating the forces of evil (antichrist), Christ establishes his kingdom and rule over the nations (19:15-16). Wright notes that Jewish Messianic expectation combined the defeat of Israel's enemies with the purifying of God's people and with 'renewing or restoring the Temple' (2011:172). This narrative description of events (Rev 19) shows what must happen *in order that* the new relationships of the temple can become the new reality on earth. Temple-theology thus conveys a theological thread running from the creation narrative through Israel's redemptive history to Christ, and finally to its eschatological consummation in the new creation. As Moltmann concludes, 'When the eternal God comes to dwell on earth, "on earth as in heaven", then this earth is to become God's temple' (2010:34).

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[551] In the OT the 'bride' is used as a metaphor for God's people Israel (Isa 54:5-6, 62:5, Hos 2:7), and in the NT for the church (Eph 5:25, Rev 19:7-8). Jerusalem as both a location and 'God's people' is clearly seen in Isaiah's description of new heaven and new earth (Isa 65:17-18). Cf. Lee's detailed study of the New Jerusalem and New Creation motif in Isaiah 65-66 (1999:12-29).

[552] See Beale (1999:938-9) on the correlation between the wedding clothes and 'righteousness and salvation'.

New Creation as the Marriage of Heaven and Earth

Wright posits that the union of heaven and earth was always intended. 'The created order… is a world in which heaven and earth are designed not to be separated but to come together' (2008:259); this final joining becomes the supreme act of the new creation, perfectly symbolised, in Wright's view, by the wedding – an act of joining, faithfulness, and union; thus 'the marriage of the lamb and his bride is to be the focal point of the marriage of heaven and earth themselves' (2011:168). The renewal of God dwelling with his people (Rev 21:3) completes this picture.[553] What was once separated as an aspect of the 'incomplete creation' will be joined by love.[554]

> When all the forces of rebellion have been defeated and the creation responds freely and gladly to the love of its creator, God will fill it with himself so that it will *both* remain an independent being, other than God, *and also* be flooded with God's own life. (Wright, 2008:102)

The analogy of marriage as anticipating the future intimacy between God and his people is rooted in OT prophetic literature.[555] It even extends to the land, as Isa 62:4 declares: 'and your land will be married'.[556]

The locus of this joining is the new Jerusalem, which is structured as the typological sanctuary or 'holy of holies' of the eschatological temple (2004:368-70). As Wright describes it:

> '[John] is constructing a symbolic universe, not an architect's design. The city will be an enormous, perfect *cube*… because that is the shape of the holy of holies at the heart of the ancient Temple in Jerusalem. The whole city has become God's dwelling place… the very centre of God's temple'.

'When the New Jerusalem descends to the earth the distinction between heaven and earth seems to be forgotten' (MacLeod, 2000:444). While Moltmann and many others see this as completion, allegorically the wedding is the initial *event*, but the marriage is a continuing *process*. We must then ask, is this also reflected in the reality of these new relationships? The bride has been prepared, putting on the clothing of righteousness, the

[553] See a similar exegesis and marital interpretation by Beale (1999:1066).
[554] Recall the 'separation' between heaven and earth as represented by the 'firmament' (cosmic temple) and the curtain in the holy of holies (structural temple). See Garvey's (2019:54-59) evaluation of separation as 'inbuilt' into original creation. The separation of sin was not inbuilt and greatly worsens that separation.
[555] See e.g. Is 54:5, 61:10, 62:5; Hos 2:19-20, 21-23.
[556] Other passages depict an integrated union with creation, e.g. 'In that day… I will respond to the skies, and they will respond to the earth' (Hos 2:21).

new embodiment of resurrection. If the new heaven and earth is seen as the 'event' of the wedding, should the new creation be seen as continuing process?

Proposal: New Creation as Continuing Process

Our study thus far has indicated a surprisingly strong level of continuity in moving from creation to new creation, incorporating discontinuity in the transitional event of Christ's coming and all it ensues – particularly resurrection. Typically, new heaven and new earth is seen as the culmination or 'teleological goal' of creation in the beginning. I propose that having established the pre-eminence of continuity, new creation itself should be seen as continuing process rather than completion. In temple terms, this would be the *process* of expanding the temple of God's presence outward to encompass the whole earth. Despite its enormous size[557] (indicating the incorporation of all God's redeemed people (Beale, 1999:1074)), the temple-city does not cover the earth, but corresponds with the inner sanctuary of God's presence. It has walls and gates (always open) through which the nations bring their honour and glory (21:25-6), indicating an outward area beyond the sanctuary. Caution is required here, since having identified the structure as symbolic of new redeemed relationships, we cannot then appeal to geography. Yet there is surely significance to the vision's measurement of a sanctuary, leaving open the question of its outer courts and surrounding lands. What might this mean in relational terms?

Approaching this another way, we have established that original creation was a) not *complete*; and b) perversely affected by sin and human exploitation. Both factors must be taken into account when assessing a 'redeemed' or 'renewed' new creation. We have also established that new Jerusalem encompasses Christ and his redeemed people – the earth and non-human creation are not yet fully components of that vision, despite the presence of the garden. Sin and evil have been dealt with in humanity, but the *effects* of sin throughout non-human creation have not. Furthermore, the original Gen 1:28 commission to Adam and Eve, dramatically cut short by sin and never realised, left creation 'frustrated' and the process incomplete.[558]

[557] The measurement was 12,000 stadia on all sides (Rev 21:15), clearly symbolic but corresponding in real terms to 1,500 miles, with walls 200 feet thick (Beale, 1999:1073-4).
[558] Beale is explicit, 'Adam's purpose in that first garden-temple was to expand its boundaries until it circumscribed the earth' (2004:369). Garvey suggests bringing about a more intimate communion through righteously subduing and ruling the earth, perhaps by 'taming' disorderly and wild elements (2019:57-9).

Beale claims, 'God's intention is one day to fill every part of his creation with his presence because he is the Creator' (2004:311). While Beale sees this as fulfilled in the 'world-encompassing temple' (2004:313),[559] Wright hints that further process is involved, suggesting humanity as 'agents of renewal' for the non-human creation (2008:185). Even within humanity, we have already established a continuing need for social transformation and healing; this is reflected in Rev 22:2: 'the leaves of the tree are for the healing of the nations'. If transformation were already complete in new creation, this would be unnecessary. Since Christ is the eschatological temple uniting God and humanity, it seems a natural parallel to envision the city-temple likewise as a dynamic *process*, directed outward from the sanctuary toward the whole earth, until it too is united and filled with his presence. The most important statement in this regard is the emphatic voice from the throne, 'I am *making* everything new!' (21:5). The present continuous tense of ποιέω following immediately after the past tense of 'for the old order of things has passed away' (21:4) is significant in reflecting continued process.[560] One would expect, 'I have *made* all things new'. The relationally new heaven and new earth is just the *beginning,* not the completion, of the renewing of creation.

What then is necessary in such a process? Wright subtly suggests it begins with 'the unveiling of those redeemed humans *through whose stewardship* creation will at last be brought back into that wise order for which it was made (2008:200 my italics).[561] 'When God's children are finally revealed in their new, glorious bodies, then the whole creation will have its own exodus, its own liberation' (Wright, 2005:149). Redeemed humanity will fully become 'created co-creators' (Hefner, 1998). What Wright approaches tentatively should, I propose, be advanced as an absolutely crucial theological concept.[562] Humanity will most emphatically *be* the 'agents of redemption' for the earth.[563] In other words, 'it's our mess, and we'll have to clean it up'. God works *through* his people: this

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[559] Beale debates the identity of new Jerusalem wholly as the new heaven and new earth, but ultimately equates the two: 'the perimeters of the new city-temple will encompass the whole of the new creation' (2004:24).

[560] Surprisingly neither Beale nor Wright highlight this point, although Beale draws attention to the allusion to Isa 43:19 and 66:22, which may well indicate the nature of 'making things new' in relation to creation.

[561] O'Donovan (1986:55) earlier proposed this same idea: 'for the created order, too, cannot be itself while it lacks the authoritative and beneficent rule that man was to give it.' He then carries this into new creation.

[562] Although Wright poses the question 'how will we humans contribute to that renewal of creation?' (2008:185), he makes no real attempt to answer that question, and is at times inconsistent in suggesting that we should do 'new creation work' *now*, 'ahead of the time when God completes the task and makes all things new' (2016b:363). The work 'will be completed' in the new creation (2013:29), but by whom?

[563] Guridi's (2017) innovative proposal sees divine kenosis the as the key to understanding the 'imago Dei' in humanity's relationship toward creation: a 'self-limiting' but also 'self-giving and self-emptying' love.

was established in the creation account, commissioned in the Eden temple, continued through Israel, Jesus and the Church, and any account of continuity cannot dismiss human agency in the new creation. This will only be possible once the impediments of sin and evil have been removed and a kingdom of righteousness established - but then the work begins. At the centre of this is Christ revealed in glory and authority, as king, head of the church, the logos and very foundation of the new creation – working *with* his people in renewal.

I propose four primary ways in which humanity will function as 'agents of redemption' in the renewal of creation:

> 1) clearing the immediate devastation wrought by the cataclysmic destruction of the Day of the Lord and the trumpet/bowl judgements, and healing the nations and human society
>
> 2) overturning the long-term effects of human sin toward the earth: the exploitation, pollution, biodiversity loss, destruction of ecosystems, cruelty and neglect of the needs of fellow creatures
>
> 3) working, as God's image bearers and co-creators, to bring out the full potential of the earth, assisting all of creation to live abundantly, alleviating suffering, disease, and cruelty
>
> 4) renewing the commission by 'ruling over creation' in righteousness, 'subduing' and reorienting creation toward a full and intimate relationship with God, gradually incorporating the whole earth into the sanctuary

The first deals with continued human transformation, the second with reversing the effects of sin, and the latter two with completing the original commission. An emphasis on the continuity of 'creation to new creation' entails that humanity continue in the role it was designated from the beginning. Only when this renewal is completed will the relational order of the cosmic temple be restored to function entirely as God intended.

Implications for the Future – Death, Matter, Space and Time

Continuity of Death in Creaturely Eschatology

We need to clarify the implications of what may now seem, strangely, a *radical continuity* in creation. In response to the question, 'will *this* tree be in the new creation?', Polkinghorne would conclude 'trees may be there – but not this tree';[564] Moltmann would

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[564] See Polkingorne's further discussion on animal destiny (2004:152, 2002b:48-9).

conclude ‘every tree that has ever been will be there’; but in this proposal the answer is simply, ‘yes – if it is alive when Christ returns’. Nature is not ‘resurrected’, therefore natural death continues. The passage so commonly interpreted as the end of death applies only to humanity: ‘there will be no more death or mourning or crying or pain, for the old order of things has passed away’ (Rev 21:4). The context of the previous verses (2-4a) clearly indicating the God-human dimension lends weight to this interpretation, together with our previous assertion that ‘death’ refers to spiritual separation, and the ‘old order’ to relational dysfunction. Resurrection overcomes death for those in Christ, not for the entire non-human creation.

Animals must be considered distinctly. For renewal of abundant life, reproduction is necessary, and reproduction requires death (Garvey, 2019:131). We have rejected Moltmann’s contention that death is a sign of ‘imperfection’ in the old order (1996:91). Creaturely death may not be a theological problem, but creaturely suffering is. Southgate (2008) and Sollereder (2019) thoroughly explore theodicies of animal suffering, suggesting the need for redemption and an ‘eschatological fulfillment for creatures’ (2008:83), at least the more complex and higher orders.[565] Southgate tentatively accepts the Polkinghorne-Russell view of transformation, but is critical of its failure to adequately address a creaturely eschatology. Rolston’s view of creaturely redemption through the fruitfulness of evolutionary process is equally unsatisfactory for ‘neglecting the predicament of the individual creature’ (Southgate, 2008:83).[566] Neither does Southgate find a satisfactory resolution in light of the insoluble problems of a universal resurrection of nature.[567] In contrast, continuity disregards this problem since Scripture gives no indication of creaturely resurrection. Creaturely suffering is a serious theological concern, but the large proportion of human-caused suffering will be alleviated through the renewal of proper human-animal relationships and the implementation of righteousness and justice toward creation. Redeemed humanity may even reduce ‘natural’ suffering in

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[565] Southgate’s teleological scheme ‘assigns progressively greater value to more complex organisms, and more complex interrelations of organisms’ (2008:71). See discussion (2008:81). Not *all* life forms would require eschatological fulfilment. Cf. Sollereder (2019:101-4).
[566] Rolston (1994, 2001). Cf. Sollereder (2019:159), McDaniel (1989:43). Sollereder writes, ‘God’s love and concern is radically individual: how to promote *this* creature’s greatest good’ (2019:103).
[567] Southgate speculates that perhaps an eternal existence would not be necessary if ‘after a period of struggle-free flourishing a redeemed animal life might fade away?’ (2008:85). Alternatively ‘objective immortality’ in which ‘the creature’s experience lives on in the memory of God’ he finds equally unsatisfactory (2008:86).

significant ways, taking steps toward the 'healing of creation' and preventing extinction (Southgate, 2008:125).[568]

The enigmatic portrayals in Isaiah – 'the wolf and the lamb will feed together, and the lion will eat straw like an ox' (Isa 65:25; cf.11:6-9) are often held to indicate a qualitative transformation in animal nature and an end of predation (e.g. deGruchy, 1999). However, Southgate finds this unsatisfactory: 'It is very hard to see how the leopardness of leopards could be fulfilled in eschatological coexistence with kids' (2008:86). Rather, Isaiah's poetic license dramatically depicts that even creaturely relationships will be affected by the peace and righteousness of the new order. Arnold likewise downplays any notion of predators becoming vegetarian (2004:104). The resurrected Jesus ate fish – and in any case, vegetation is also life, so these verses are not indicating an 'end of death'. Garvey points out that all life is designed to live off of other life;[569] the whole earth ecosystem is fit for that purpose, neither wasteful nor evil (2019:131). The Isaiah passages must be conditioned by the concluding statement, 'They will neither harm nor destroy on all my holy mountain'. Fulfilment and joy in life, rather than creaturely immortality, will mark the new heaven and new earth.[570]

Continuity of Time and Millennial Transition

Continuity through renewal implies that these processes will take time – perhaps a very long time. Establishing the kingdom of God fully throughout all nations will take time; overturning thousands of years of human exploitation of the earth will take time; restoring the human-earth and human-creature relationships and completing the commission will take time. In this proposal, neither matter nor the time-space universe is transformed, therefore there is no necessity that 'time' itself be transformed into a new 'eschatological time'. Our *experience* of time could change in a redeemed world, but there need be no change in time itself: day and night, seasons and years would continue.[571]

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[568] 'Healing' could involve eradication of disease, parasitism, unnecessary cruelty. Southgate rejects the 'naturalistic inference that what *is* in a wild system is what *ought to be*' (2008:124), proposing a new era in which extinction ends and possibilities of 'self-transcendence among existing species' are explored (127).
[569] There is no set place to 'draw the line' between animal and plant. (e.g. Bacteria, plankton, micro-organisms).
[570] See also Beale (2004:307),
[571] The idea that 'heavenly time' will qualitatively change the nature of time in the new creation is dubious in light of the parallel temporal durations in heaven and earth (Rev 8:1, 9:5, 11:2-3).

As we have seen, many in the science-theology dialogue concur with Bauckham and Hart: '[The *parousia*] is the event which brings the temporal history of the world to an end. It is not just the last event of world history, but the event that ends history' (1999:118).[572] However, this reasoning is conjoined to the Polkinghorne-Russell view of space-time transformation, which we have rejected. Likewise Ladd (and many others), interprets Christ's coming as the consummation of history – not a historical event like any other, but 'the inbreaking of God into history' (Ladd, 1974:335). But this 'inbreaking' need not entail history's 'consummation'. Jesus' first coming / resurrection has been described in precisely the same way, yet time and history continued. Rather we conclude there is discontinuity in the world order, but not an end to the world itself; discontinuity in the progress of human history, but not an end to history itself; discontinuity in the natural environment, but not an end of nature itself, nor its material transformation.

That continued process is necessary *within* new creation becomes even more clear when the broader biblical context is explored. Rev 20 portrays a sequence of events ostensibly taking place *after* Christ returns and covering a 1,000 year 'millennium'. Isa 65:20 adds a similar challenge:[573] some human death appears to still be present in the new creation. These narratives imply that an unredeemed humanity surviving the 'Day of the Lord' judgement will continue living on earth even after *parousia* and resurrection, until the end of the millennium, when a final rebellion stirred up by Satan is utterly destroyed by God (Rev 20:7-10). Then follows a second resurrection, final judgement, and the ultimate end of death and Hades (20:11-15). This sequence entails the puzzling situation of both resurrected and non-resurrected humanity living at the same time.[574] Paul writes of this same order of events (1Cor 15:23-28), where the Son must reign 'until he has put all enemies under his feet', making all things subject to him 'so that God may be all in all.' The importance of this sequential 'ordering' or 'succession of events' in new creation is highlighted by Frederickson (2000:25), demonstrating not only temporality but process and change over time.

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[572] Bauckham and Hart go on to explain, 'It cannot be an event in time and space like the other events of history, since it is the event that happens *to all time and space'* (1999:118 my italics), Cf. Bauckham (2007:314).

[573] In the context of the new heaven and new earth, Isa 65:20 states: 'Never again will there be in it an infant who lives but a few days, or an old man who does not live out his years' suggesting human death is still present.

[574] Strange as this seems, the precedent is of course the resurrected Jesus interacting on earth for 40 days.

This narrative is completely inexplicable in a scenario where 'new creation' is a completion with no continued process. Those who opt for such a view must either compress these events into the single 'event' of Christ's return, or explain the events symbolically. Disappointingly, Wright adopts a symbolic interpretation of millennium (2011:179-80), compressing the rest of the narrative around the *parousia* event. This results in a highly unsatisfactory explanation inconsistent with Wright's otherwise strong view of continuity and usual hermeneutical approach.[575] Polkinghorne rarely mentions the millennium, unsurprisingly concluding, 'Many of us remain unconvinced of the need for such a transitional episode' (2002a:87).[576]

Moltmann is well-known for the singular importance he places on the millennium.[577] 'Christian eschatology – eschatology, that is, which is messianic, healing and saving – is millenarian eschatology' (1996:202). Bauckham however, is rightly critical of the inconsistency between Moltmann's millennial eschatalogy and his views of 'aenoic time' (1997; 1999b:134ff). Moltmann's millennium takes place 'within history' (1996:197) but detached from the other events gathered into the eschatological moment of new creation. This is not the place to work out the complexities of the Rev 20 narrative or to assess diverse millennial interpretations. The purpose here is simply to propose that a millennial narrative provides a credible framework for transition and continuity *within* new creation, tying the events of *parousia* to the final events of Rev 20:7-15 and 1Cor 15:23-8, allowing for life *and* death (Isa 65:20) in the context of kingdom reign, and providing a plausible explanation for a final rebellion (Rev 20:9).

Continuity of the Physical Universe and its Implications

In proposing such radical continuity, the problem of the 'futility' of the universe remains unresolved. While cautiously accepting the scientific consensus on ultimate deterioration toward heat-death,[578] we argued that this existential angst is misplaced because the time

[575] We have previously noted Wright's caution in ascribing activity to an 'intermediate state'. His symbolic interpretation of millennial reign as a 'heavenly reality' for the church is strangely incongruous. He simply concludes, 'Presumably they aren't just sitting there doing nothing' (2011:180).
[576] A millennium transition is simply extraneous to Polkinghorne's divine transformation. This may seem a rather scandalous disregard for Scripture, but here Polkinghorne is critiquing Moltmann's insistence on the value of a literal millennium. Polkinghorne regards it as merely as a 'symbol of the end' (2002a:87).
[577] Bauckham claims Moltmann has brought the millennium in 'from the margins to which mainstream theological tradition has assigned it' (1999b:123). It remains a powerful influence in Dispensationalism, Pentecostalism, much of American evangelical theology, and overwhelmingly in popular theology.
[578] Caution recognises that human knowledge of cosmological 'certainties' is in its infancy. Until 100 years ago, we had no concept of a 'universe' beyond our own galaxy. Even 20 years ago, there was no consensus

scale is irrelevant to human life. Projecting a human notion of futility onto God is entirely unwarranted; God may have perfectly sound reasons for creating exactly such a universe. If futility is a concept of the human mind, it is senseless to consider its validity outside the parameters of human existence. Yet human existence is the blink of an eye in the cosmic timescale. Theologically we project ourselves into that timescale through a speculative notion of 'eternal life', yet we have argued against equating this with 'eternity'. Eternal life indicates 'life in the age to come'. The age to come is of unknown duration and could lead on to unknown possibilities: a gradual panentheistic coalescence into the divine life as Moltmann and Polkinghorne suggest, an expansion of the priestly commission beyond the earth to other star systems or galaxies, or even perhaps, an ultimate ending.[579] But we should not become imprisoned by a concept of eternal life as forever unchanging.

This does not diminish Polkinghorne's plea for a theological discourse consonant with a scientific account of creation (1994a:73). Theology must engage seriously with the insights of science regarding the universe. But we must also take seriously the difference between the Bible's *relational* account of creation (as heaven and earth) and science's *material* account of creation (physical universe). Both need theological engagement, but they cannot be confused or merged. They can be joined at their point of intersection – where humanity becomes part of the order of creation – and here there is work yet to be done. A complete doctrine of creation must incorporate both the scientific account of the created universe (and its eschatological end) and the relational account of biblical cosmology and eternal life, an ongoing challenge for the science-theology dialogue. But the real existential challenge we face today is not millions or billions of years into the future, but the imminent threat of human-induced climate change. This is the nexus linking scientific and biblical eschatology and the area where science and theology can be of greatest benefit to one another in saving and renewing this present creation – currently in imminent danger of cataclysmic destruction.[580]

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on whether gravity or expansion would prevail. Today we know very little about the dark energy and dark matter comprising the great majority of the universe, nor the full implications of a quantum universe. Dogmatic certainty must be tempered by the humility of limited human knowledge.

[579] The prospect of an inescapable existence of unending duration, however fulfilling, can be frightening.

[580] Moo and White call this a ''perfect storm' of factors coming together in a way that threatens the future life on earth' (2013:13). See also White (2009).

Continuity and the 'New'

In light of such strong continuity for the earth – with neither permanence nor the transmutation of matter – one might justifiably ask, what is really 'new' about the new creation? Bauckham and Hart argue that John's use of καινός over νέος (for 'new') indicates 'the qualitatively new, the unprecedented, the new which utterly surpasses the old' (1999:77). The tabernacling presence of God in the OT temple, embodied in Christ in the NT, is utterly surpassed by the fullness of God's presence dwelling on earth – a completely new union of heaven and earth. In terms of temple theology, the 'relational creation' – made dysfunctional through human sin and rebellion – will be made new through the *removal* of all barriers to the harmonious functioning of those relationships: sin, wickedness and evil, rebellion against God, opposing powers and principalities, and the problem of 'separation'. As Wright asserts:

> What we have in Revelation… is the *utter transformation* of heaven and earth by means of God abolishing, from within both heaven and earth, everything that has to do both with the as-yet incomplete plan for creation and, more particularly, with the horrible, disgusting and tragic effects of human sin… The new world will be like the present one, but without all those features, particularly death, tears and everything that causes them, which make the present world what it is. This is what is meant by there being 'no more sea'. (2011:189-90).[581]

Renewal of the God-human relationship makes possible the renewal of the human-earth relationship: the re-ordering of all creation toward God;[582] the renewal of creation's fertility curtailed by the curse (e.g. the deserts will bloom - Isa 35:1); the righteous rule of humanity over the earth; creation's freedom (Rom 8:21) to explore its full potential. This removal of relational impediments provides a far greater transformation of *life fully lived* than that achieved by models of static completion or perfection.

Implications for the Present

Christian Life and Work

The most important implication of continuity for the present is that what we do *now* matters. It makes sense of present Christian efforts to transform societies, create works of lasting value, care for creation, and do everything possible to counter the debilitating

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[581] Wright interprets 'there was no longer any sea' (Rev 21:1) in terms of ANE creation accounts where sea represents the forces of chaos and disorder – the 'monsters' that emerge in opposition to God (2011:190).
[582] Dumbrell sees present creation as 'a world disordered by sin', and eschatology as 'a search for order' (1994).

human impact on earth's ecological systems and 'save the planet'. Granted these efforts are necessarily limited and constrained by the pervasiveness of sin and evil in the world, but it validates the command of 1Cor 15:58, 'Always give yourselves fully to the work of the Lord, because you know that *your labour in the Lord is not in vain*' (my italics).[583] Wright expresses this idea well:

> What we can and must do in the present… is to build *for* the kingdom. …Every act of love, gratitude, and kindness; every work of art or music inspired by the love of God and delight in the beauty of his creation; …every act of care and nurture, of comfort and support, for one's fellow human beings and for that matter one's fellow nonhuman creatures; …all of this will find its way, through the resurrecting power of God, into the new creation that God will one day make. (2008:208).

Moltmann suggests that 'the ecological death of the earth is the work of human beings' (1996:90). I suggest the ecological renewal of the earth must also be the work of human beings. This gives meaning to Martin Luther's famous assertion that even if he knew the world would end tomorrow, he would still plant his apple tree today. What is worthy of being retained will be retained, and what is not must be redeemed, or done away with.[584]

Somewhat surprisingly, Wright denies any knowledge of *how* this might happen. 'I do not know how the painting an artist paints today in prayer and wisdom… [or] how our work for justice for the poor… will reappear in that new world' (2008:209). In this context of continuity, Wright's dilemma is unclear. As in any major transition, much of the old may be lost, but much of value will be retained.[585] The work of kingdom building and renewal in the new creation will begin where the work of God's people in the present ends – but in an entirely new *context* of righteousness radiating from the presence of Christ reigning on earth (Eph 1:20-23). 'For we are God's workmanship, created in Christ Jesus to do good works, which God prepared in advance for us to do' (Eph 2:10). The inauguration of the kingdom in Christ's first coming will be tangibly established through his second coming; the kingdom of God may be seen as the outworking of the relational cosmic temple. As Wright states, the phrase 'Kingdom of God' was in fact 'a Jewish way of talking about Israel's God becoming king. And when this God became

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[583] Despite continuity, the process of transformation in its fullness cannot take place until sin and evil are removed, and the 'sons of God' are revealed in resurrection. Cf. Polkinghorne (2004:147-8).
[584] See Davis's exploration of new work in the new creation (2007), suggesting all human work (e.g. art, music, business) excluding things sinful will continue, not merely the work of renewal, also Cosden (2004).
[585] E.g. The fall of the Roman empire brought much of what was 'Rome' to an end, including its oppression and dominion, yet the positive values, ideals, knowledge, and even many of its works have continued as a legacy of the Western world.

king, the whole world, the world of space and time, would at last be put to rights' (1996:202-3). The kingdom work of the new creation *will* be renewed and redeemed, but in continuity with the missional work of the gospel in the present.

Theology and Mission: Creation Care and Renewal of the Earth

This study began with the assertion that our world is facing an existential crisis, and its very future is in jeopardy. Further, that the relative failure of Christianity to take seriously the implications of this unfolding ecological disaster is largely due to an inadequate theology of creation and a discordant and ambiguous eschatology. Davis (2000) speaks of 'ecological blind spots' in evangelical theology.[586] A more robust theology of 'creation to new creation' is desperately called for to enable a serious and unified missional response to the environmental crisis of climate change and the numerous related ecological challenges facing our planet. Recently there have been positive signs of change, both in the burgeoning 'Christian creation care' movement, and in many theological works asserting a 'renewal of the earth' and a 'community of creation'.[587] However, the general lack of integration between creation care and eschatology promotes a 'stewardship' view of the human-earth relationship with little insight into its future purpose or teleological value. Although recent works in 'eco-theology' and 'theology of creation' have engaged far more deeply with eschatology, only a very few have advocated a *process* view of renewal contingent on human agency. Without such a view, renewal of the earth as a divine event fails to meaningfully connect environmental mission *now* to our eschatological future, or to provide a rational, purposeful, biblical justification for prioritising Christian action in the present, when juxtaposed alongside more 'urgent' anthropocentric missional concerns.

Moltmann has been an extraordinarily powerful proponent of an earth-centred Christian theology. Well in advance of others he recognised that ecological destruction and exploitation of the earth threatened the very conditions of our existence and advocated

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[586] Davis (2000:275) notes the amount of attention given to creation and *evolution* far outweighs the attention given to humanity's proper *relationship* to creation.

[587] Recent works include: Bauckham (2010; 2012), Berry (2003; 2011), Bookless (2008; 2014), Bouma-Prediger (2001), Chipps (2014), Deane-Drummond (2008), Gardner (2002), Garvey (2019), Gottlieb (2006), Hodson (2002; 2011), Hodson and Hodson (2008; 2017), Horrell (2010), Howles (2019), Isaac (2015), Marlow (2008), Middleton (2006; 2014), J.Moo (2010; 2011), Moo and White (2013; 2014), Santmire (2000), Snyder and Scandrett (2011), Woodman (2011), C.Wright (2014). See also valuable edited compilations: Berry (2006, 2007), Habel (2000), Hiestand and Wilson (2018), Horrell et.al. (2010), Gunton (1997), Gurtner and Gladd (2013), Moo and Routledge (2014), Toly and Block (2010).

that the earth must be put at the centre of our economics, politics, and even spirituality. Eventually he claimed, ‘The general framework for theology today is *the theology of the earth*’ (2000a:83). Yet this theology has not resonated with the great majority of Christians – nor has the science behind it. Roller and Huang’s recent research indicates that, ‘Despite mounting scientific evidence that human activity is negatively impacting the planet, many evangelical Christians remain apathetic about environmental concerns and resistant to seriously engaging in creation care’ (2020:3).[588]

This apathy I suggest is largely because the warnings of both science and theology remain coupled to an eschatology of discontinuity, thus failing to answer the ‘why’ question. Why should the church put valuable resources and energy into long-term environmental renewal efforts when human needs are urgent and, especially, when ‘all things will be made new’ when Christ returns? But an eschatology which advocates a process-oriented ‘renewal of the earth’ is competing against – on the one side – the traditional and pervasive end-of-the-world apocalyptic perception – and on the other side – a transformational view in which humans are merely bystanders, resurrected into a divinely completed new creation.[589] (This is without even considering the most common perception of ‘going to heaven when you die’).

There are hints of change. In 1990 a fifth ‘mark of mission’ was added to the four previously established by the Anglican Consultative Council: ‘to strive to safeguard the integrity of creation and sustain and renew the life of the earth’.[590] Significantly, this is the only non-anthropocentric mark of mission, suggesting that the *missio Dei* is not merely salvific but holistic. ‘Sustain’ is a maintenance word, but ‘renew’ hints at a missional goal beyond merely care or stewardship. Other scholars also advocate a ‘wider gospel’ incorporating creation,[591] or advance terminology of ‘integral mission’ and ‘holistic mission’. Snyder and Scandrett call for a ‘wholistic and earthed discipleship’:

> Too often mission and spirituality are discussed *as if the earth itself did not even exist.* Standard works in systematic theology seldom deal in any depth with

[588] Cf. Hay (1990), Hayhoe and Farley (2009), Hodson and Hodson (2015), D.Moo (2010:25), Truesdale (1994).
[589] Roller and Huang’s study (2020) lays out these evangelical positions in light of eschatological expectations. See also Schwartz (2000), Zoba (1995).
[590] The first four ‘marks of mission’ include: 1) to proclaim the Good News of the Kingdom, 2) to teach, baptise and nurture new believers, 3) to respond to human need by loving service, 4) to seek to transform unjust structures of society. For overview, see C.Wright (2015).
[591] See e.g. C.Wright (2014), Bell and White (2016), Bookless (2014), Gould (2014), McConnell (2014), Simiyu and Harris (2008), Snyder and Scandrett (2011), Sugden (1996).

> ecology, culture, the physical earth, creation care, or the practical implications of God's will being done on earth as in heaven. Biblically speaking, this is indefensible; it is a scandal.' (2011:131).

Munther Isaac builds an extensive case for a 'missional theology of the land' (2015:347ff), arguing that Jesus covenantally inherits the land (earth) – which through Christ becomes the inheritance of all God's people.[592] In 2016 Pope Francis called widespread environmental degradation a collective human sin.[593] Gospel reconciliation calls not only for reconciliation with God, with others, and with self, but with the earth. 'The nourishing and flourishing of the earth is not a detached or incidental matter in the gospel and in Christian mission' (Snyder and Scandrett, 2011:150) 'Wholistic mission must include mission to and on behalf of the earth' (2011:155). As Bookless aptly states, 'God is a relational God, so he has made us relational beings, tied to the earth by our dusty origins' (2008:50).

As true as these assertions are, they will fail to engage the church without a robust theology of continuity from creation to new creation – one which also recognises God's redeemed people as his agents of renewal for the earth. An eschatology based on discontinuity will ultimately fail to stir the larger church into concerted environmental action. Some Christians will even see environmental mission as counterproductive, delaying the advent of the Kingdom of God.[594] But with an eschatology of transformation and renewal, all that can change. What we believe about the future determines how we act in the present. The work we do *now* in the present creation will have real and lasting value into the new creation, even transcending a cataclysmic 'ending' of the present world order. How we choose to live now truly matters, as we look toward a new heaven and a new earth.

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[592] D. Moo sees this as the proper 'universalizing' hermeneutic of the NT (2010:27). Middleton also notes seven prophetic or covenantal promises of restoration including land (2014:105-6). Jaki views the new Jerusalem as 'the completion of the Covenant which started with the creation of the world in the beginning' (1974:159). See also Lee (1999:238-9).
[593] This followed publication of the encyclical 'Laudato Si' (2015) using similar language.
[594] Hodson and Hodson (2008:201), Bouma-Prediger (2001:76).

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