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Cosmological and Biblical Eschatologies: Consonance or Dissonance?

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Introduction

There has been an increasing interest in the fascinating relationship between science and theology during the last two decades. One stimulus behind this lively interest is the emerging sense of consonance between the two disciplines. Today many scientists and theologians are arguing that the historical breach between science and theology is unhealthy. Instead, science and theology complement one another as both try to understand the universe,

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albeit from different perspectives. This turn around in the prevailing mood has been most dramatic. In 1966, Barbour wrote, '... most writers today see science and religion as strongly contrasting enterprises which have essentially nothing to do with each other.'2 In marked contrast Charles Townes, Nobel Laureate, in an article in Science in 1997 wrote, 'Many scientists today believe that the two li.e. science and religion can not be separated.'3 However, does this sense of consonance remain when it comes to eschatology? In this paper I will point out that cosmological and biblical eschatology clash quite starkly. Does this clash justify the historical breach between science and theology, or could this

¹ See for example the stimulating essays in Ted Peters (ed.), Science and Theology: The New Consonance (Boulder, Colorado: Westview Press, 1998)

² Issues in Science and Religion (New York, N.Y.: Harper & Row), p. 1.

³ Also see Townes's article 'Logic and Uncertainties in Science and Religion' in Science and Theology: The New Consonance, pp. 43-55.

apparent dissonance be resolved? I will focus most of my attention on the biblical text.

Cosmology

Cosmology has proposed several scenarios for the end of the universe. They generally depend on the idea that the universe began with a massive explosion, the so-called Big Bang. That the universe had a beginning is one of the logical deductions from the Second Law of Thermodynamics, which states that entropy (disorder) either increases or stays the same in a closed system.⁴ The Big Bang initiated a massive expansion of the material universe from a point of singularity with the stretching of space at phenomenal speeds into the enormous universe that we observe today. According to cosmologists, this suggests two basic scenarios for the end of the universe. The universe may either continue to expand and eventually cool down as entropy reaches a maximum, or it may re-collapse under the forces of gravity into a Big Crunch. 5 In the first scenario the universe will become lifeless as it cools down, also called Heat Death. Most cosmologists regard this scenario as most likely. In the second scenario, if the gravitational forces within the universe gain the upper hand, the universe will crash into itself crushing all existing galaxies, explosion will become implosion. The universe itself may cease to exist.

However, life on earth would already have ceased long before either Heat Death or the Big Crunch since it is very much dependent on the sun which has a life span of about 10 billion years. With the death of our sun, about another five billion years away, all life will cease to exist. Another more likely and more imminent scenario for the destruction of life on earth is the threat of a foreign body impact. Cosmologists and geologists estimate that this happens about every 30 million years and that an impact is already overdue.⁷

7 See Paul Davies's imaginative description and discussion of this scenario in The Last Three Minutes: Conjectures about the Ultimate Fate of the Universe (New York, N.Y.: BasicBooks, 1994),

pp. 1-7.

⁴ See Alan Lightman, 'The Second Law of Thermodynamics' in *Great Ideas in Physics* (New York, N.Y.: McGraw-Hill, 2000), pp. 59-115. The detection of background radiation of very low intensity running uniformly from all directions echoing an enormous explosion, and the redshift observations of Hubble indicating an expanding universe, are regarded by scientists as providing evidence for the Big Bang. R. E. Peacock, *A Brief History of Eternity: A Considered Response to Stephen Hawking's A Brief History of Time* (Eastbourne: E Sussex: Monarch, 1989), pp. 106-110.

See Paul Davies, The Last Three Minutes: Conjectures about the Ultimate Fate of the Universe (New York, N.Y.: BasicBooks, 1994); and F. Adams and G. Laughlin, The Five Ages of the Universe: Inside the Physics of Eternity (New York, N.Y.: The Free Press, 1999).

⁶ Stephen Hawking argues in his influential book, A Brief History of Time: From the Big Bang to Black Holes (London: Bantam Books, 1988), that the universe had no beginning and will have no end. In fact, a similar view was already propounded by Aristotle—the universe is an unchanging entity. Hawking argues for the possibility that the universe has no boundary, and therefore there is no need for a creator to explain its existence. However, Hawking still recognises that even if his theory is correct, many why questions still remain to be answered; as Polkinghorne and Stannard have pointed out, the existence of the laws of physics must still be explained. Hawking's hypothesis has not been widely accepted. David Wilkinson, God, The Big Bang and Stephen Hawking: An Exploration into Origins (Tunbridge Wells: Monarch, 1993), pp. 87-88.

Therefore, the picture that cosmology paints for the future of the earth is one of devastation. In all these scenarios the earth, and eventually the universe itself, are heading toward a catastrophe that will extinguish all forms of life. In other words, at least from the human perspective, the future is quite pessimistic.⁸

Biblical Eschatology

Biblical eschatology on the other hand presents a much more optimistic picture. The Bible does not predict a catastrophic end to life but rather anticipates a new era of well-being and prosperity. The contrast between cosmological and biblical eschatologies cannot be greater. How, then, does biblical eschatology picture the distant future?

A look at the term *eschatology* already begins to answer this question. The term does not occur within the Bible but is used as a technical term within the discipline of systematic theology. It is derived from the

combination of two Greek words, eschatos meaning 'last' or 'end', and logos meaning 'word' or 'doctrine'. Therefore, based on its etymology, and also reflecting popular understanding, it means the doctrine of the end or the doctrine of the last things. However, from a biblical perspective, an important qualification needs to be made. The Bible does not speak of the end of the world as if the world and the universe will one day cease to exist. 10

In a marked contrast to cyclical conceptions of history and cosmological scenarios of a catastrophic end, the biblical writers describe history as linear, as moving towards a positive goal. 'God is driving history towards ultimate fulfilment of his purposes for creation and his people as a whole. 11 In depicting the future the verb ml' meaning 'to be full' or 'to fill' is used in connection with the fulfillment of prophecy (cf. Josh. 24:45[H 43]; 23:14; 1 Kings 8:56; 2 Kings 10:10; 1 Sam. 1:23; 15:11,13; 2 Sam. 7:25; Ezek. 12:25,28). In prophetic contexts it is

⁸ Polkinghorne writes on the predictions of cosmology, '..., one way or the other, the universe is condemned to ultimate futility, and humanity will prove to have been a transient episode in its history.' Science and Christian Belief: Theological Reflections of a Bottom-Up Thinker (London: SPCK, 1994), p. 162.

⁹ The noun *slwm* (peace) is often used with respect to the future state of God's people and is one of the most important theological words in the Old Testament, occurring more than 250 times. The term has the general meaning of 'completion and fulfillment—of entering into a state of wholeness and unity, a restored relationship.' Harris, et. al., *Theological Wordbook of the Old Testament* (Chicago: Moody Press, 1980), II, 93. Cf. Gen. 15:15; Lev. 26:6, Num. 6:26; Ps. 29:11; 37:11,37; 72:3,7; 85:1,8; 122:6-8; 125:5; Is. 9:6-7; 26:12; 32:17-18; 54:10,13; 55:12; 57:2,19; 66:12.

¹⁰ The Old Testament term for 'end' qs refers to the destruction of a people, often occurring within the context of judgment, or to the end of a specific period of time, rather than the cessation of existence, cf. Gen. 6:13; Ezek. 7:1-2; Dan. 8:17; 11:35,40; 12:4,9,13; Amos 3:15; 8:2. In the NT the term telos, usually translated 'end', refers to the eschatological era of fulfillment, cf. Mt. 24:6,14; Mk 13:7; Lk 21:9; 1 Peter 4:7; 1 Cor. 10:13; 15:24; Mt. 10:22; 24:6,13,14; Mk. 13:7,13. The term eschatos ('last', 'uttermost', 'end') is also frequently used in an eschatological context, cf. Mt. 12:45; 19:30; Jn. 6:39,40,44,54; 11:24; 12:48; Acts 2:17; 1 Cor. 4:9; 15:8,26,45,52; 2 Tim. 3:1; Heb 1:2; James 5:3; 1 Jn 2:18; Jude 18; Rev. 1:11.

¹¹ R. J. Bauckham, 'Eschatology' in *New Bible Dictionary*. 2nd ed. (Leicester, England: IVP, 1982), p. 342.

mostly a positive term.

On the other hand, it is significant to note that klh, which also means 'to fulfill' or 'to accomplish', but which has the secondary meaning of 'to cease' or 'to perish', is not used to describe the future. According to Harris. 'The basic idea of this root is "to bring a process to completion".'12 Therefore, from a biblical perspective, when we deal with eschatology we are not dealing with the 'end', the cessation of existence, or even with the destiny of individuals, but rather we are dealing with the destiny of God's people with which the destiny of the whole cosmos is linked

Old Testament Eschatology

Old Testament faith was from the beginning very much a forward-looking faith. The first chapters of Genesis depict the hope of a future era in which God's peace, lost in antiquity,

12 Theological Wordbook of the Old Testament (Chicago: Moody Press, 1980), I, p. 439. The process which is brought to an end may be positive (Gen. 2:2; Num. 7:1; 1 Kings 6:9), but mostly it has a negative meaning (Lev. 26:44; Is. 1:28; Ezek. 4:6; 6:12; 7:8; 13:15).

would be restored to all peoples. 14 Thus, throughout the biblical record, the faithful were encouraged with the hope of blessing and prosperity to come. This future hope of the individual was very closely associated with the future of the nation. Individual identity was something alien in the ancient world as the future destiny of the individual was closely tied up with the fortunes of the community of which the individual was a member. Therefore, the Old Testament saw the future in terms of the common destiny of the nation. In this way Old Testament eschatology is primarily a corporate eschatology. We will see that this corporate eschatology eventually came to incorporate the cosmos itself. Thus corporate eschatology develops into cosmic eschatology. However, even within descriptions of cosmic transformation, the people always stand at the centre. In this sense biblical eschatology always remains anthropocentric.

Israel's Prophetic Expectation

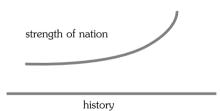


Figure 1

¹³ The Wellhausen school of Old Testament research held that Israel had no real eschatology before the prophets. However, this strict association of eschatology with the prophets has been criticised by later scholars, especially starting with Gunkel and Gressmann. Biblical faith, as far as we can detect, has always had a future eschatological orientation. The patriarchal promises concerning land, posterity, and blessing almost certainly reflect very early traditions. Hence, John Bright could write, "...Israel's faith had always had an eschatological orientation in that it looked forward to the triumph of Yahweh's purpose and rule.' A History of Israel. 3rd ed. (London: SCM Press, 1981), p. 452. So too Rowley, 'Throughout the Old Testament there is a forward look.' The Faith of Israel: Aspects of Old Testament Thought (London: SCM Press, 1956), p. 177.

¹⁴ Cf. Gen. 3:15: Gen. 12:1-3.

In order to understand the strong future orientation of Old Testament faith one should remember that Israel was a small conglomeration of clans vying for identity and existence during a turbulent period in the Ancient Near East, Israel was constantly hectored by surrounding tribes competing for agricultural lands in Palestine. In addition, the powerful dynasties of Egypt and Mesopotamia often threatened the political and religious independence of the nation. Not surprisingly, the hero or the hope of the nation came to be the military warrior. Israel's most successful and popular king, David, was eminently a man of war. It was natural therefore for the early Israelites to regard the ideal future as an age when their existence and freedom would be secure from other competing nations. It is easy to understand how the nation came to hope in the military intervention of Yahweh on their behalf. Several texts speak of Israel's God, Yahweh, as a God of war. 15

Therefore, in pre-exilic Israel, future hope was closely tied to the national security and prosperity of the nation. The fulfilment of the promises, mostly that of land, descendants, and rule. 16 was seen within a linear historical framework. They expected that through faithful obedience to Yahweh and under the tutelage of a Davidic king, the national history would eventually reach consummation in an era of prosperity and peace (cf. Figure 1).

15 Cf., Ex. 15:3; Is. 42:13.

However, the harsh realities of civil war and the two exiles shattered this hope. According to John Bright. 'To hope for the continued existence of the nation, or for the coming of an ideal Davidide—perhaps the next one—who would restore its fortunes, was no longer possible. '17 The Babylonian exile crushed all Israelite hope and caused a crisis in faith. However, out of these historical disasters emerged a more transcendent eschatology expecting a direct intervention of God, which would not only change Israel's situation for the better but would radically transform history itself. 18 The prophets frequently employed the imagery of the natural world to describe the transformation that will take place with the arrival of Yahweh's ultimate salvation.¹⁹ The accompanying judgment is also pictured in terms of the coming of great natural disasters, the melting of the earth, flooding, winds, fire, and darkness. Positively, blessing is portrayed by abundant harvests, regular rains, and luscious vegetation.²⁰ Later, especially in the

¹⁶ Gen. 12:1-3: Dt. 28:1-14: 2 Sam. 7:12-17.

¹⁷ A History of Israel, p. 452.

¹⁸ The prophets did not merely call the people back to covenant faithfulness—they were not merely guardians of the covenant—but proclaimed a new message of an even greater exodus to come (Is 42:9; 43:18-19). The radical nature of this new proclamation marked a watershed in the development of biblical theology. Between the exodus and the exile Israelite faith had a primarily backward orientation, looking back to the Exodus, the great event of deliverance that defined the identity and purpose of the nation. The corruption of the kings and the events of the captivities coupled with the activities of the prophets changed this perspective towards the future.

¹⁹ Cf. Hos. 13:15; Amos 9:5-6; Joel 1:15-20; 2:10, 30-31; 3:14-16. 20 Amos 9:13; Joel 2:23-24; 3:18.

apocalyptic prophecies, it appears that nature itself is going to participate in the transformation that God is going to bring about for his people.²¹ Corporate eschatology now takes on a cosmic significance.

One must grant, of course, that these passages employ metaphorical language to describe the prosperity and blessing that will accompany God's future act of salvation, wanting to create an overwhelming impression of the momentous change that will occur in the future with the present world. However, within the canonical context it is with transparent that metaphors of nature the writers looked to something that lay beyond common experience. The God who is going to effect the changes was also the one who created the world in the beginning. Something no less than a new creation is envisaged with the employment of these nature metaphors.²²

The Day of the LORD

One of the most important expressions within Old Testament prophetic literature designating future expectation is that of the Day of the

LORD.²³ The expression is used to denote the concept of a future time of blessing and prosperity. Several traditions concerning the Day of the LORD can be detected within the Old Testament. It is certain that the concept associated with the expression underwent many historical transformations.²⁴ Most scholars regard the origin of the expression in some way associated with the notion of holy war.²⁵

Amos, in the eighth century BCE, was the first prophet to use the expression as a major theme. In Amos 5:18-20 the expression occurs three times and is used as a traditional phrase designating coming blessing. Amos, however, turns the concept on its head by stating that it will bring 'darkness, and not light'. It is not going to be a time of blessing, but a time of judgment. It is important to note that the terminology used to describe the Day of the LORD here recalls creation imagery. rather than that of warfare.2 return to chaos and disorder, like that

²¹ Is. 11:6-9; 35:1-7; 40:3-4; 41:18-20; 43:18-20; 51:9; 55:12-13.

²² So too, according to Donald Gowan, Old Testament eschatology states that three transformations must take place: 1) the human person; 2) human society; 3) and nature itself. Eschatology in the Old Testament (Philadelphia: Fortress, 1986). These transformations are well described in Ezekiel 36:22-38. According to Gowan, this pattern occurs on many other occasions and includes everything the Old Testament savs about eschatology.

²³ The word 'day' ywm in Hebrew can either designate a point of time or a sphere of time. It can denote: 1) the period of light, 2) the period of 24 hours, 3) a general vague 'time', 4) a point of time, 5) a year (in plural). The term also is surrounded by many theological themes related to God's sovereignty and acts of salvation. The expression 'the day when' often introduces events of particular importance in the history of salvation, cf. Dt. 4:32; Num. 15:23.

²⁴ George Fohrer, Introduction to the Old Testament (London: SPCK, 1968), p. 430.

²⁵ According to von Rad, the concept stems from holy war. Old Testament Theology (London: SCM Press, 1965), II, pp. 119-125. Also see George Fohrer, History of Israelite Religion (London: SPCK, 1968), pp. 270-271.

²⁶ Gen. 1:1-5. Commentators often overlook this point.

at creation, is envisaged.²⁷

The concept of the Day of the LORD is also prominent in the New Testament. The most significant reinterpretation that occurs in the usage of the expression is that the Day of the LORD (Yahweh) becomes the Day of the Lord (Christ). ²⁸ The Day becomes the year of the manifestation of Christ. As such, the New Testament writers associated the dawn of the Day of the LORD with the 'first' coming of Christ. ²⁹ However, the consummation of the Day of the LORD is associated with the 'second' coming of Christ. ³⁰

The Apocalyptic Vision

Old Testament eschatology reached its final stage of development in the apocalyptic vision. The prophecies, especially those of Second Isaiah, pointed to a new exodus in which Yahweh himself would come to deliver his people from exile. In 539 BCE under Cyrus, the Jewish captives were released from the Babylonian exile and allowed to return to the land. Needless to say, this created great expectations for a restored and strong Israel among the faithful:

God was reviving the nation and it would not be long before Israel reached its destiny.

However, the euphoria was short lived. Most Jews did not return to the land. The minority who did return found their hope for a new powerful Davidic state dashed with the harsh realities of the actual conditions. They were but a meagre shadow of their former glory. The depressing situation did not correspond to the great promises. These circumstances lead to the flowering of the apocaluptic vision. The Babulonian exile and the fragile state of the people of Israel after the return caused doubts about the idea of historical theodicy. The return to the land occurred as prophesied by the prophets, yet the expectation of a new and glorious Israel was not realised. Even after the reforms of Nehemiah, the situation remained pessimistic. In other words. history had become a conundrum (cf. Figure 2).

Israel's Historical Experience

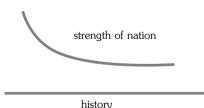


Figure 2

²⁷ Creation imagery is also very prominent in the corresponding passage describing the Day of Yahweh as judgment (§s 2:12-19). Here there are many remnants of the military origins of the expression.

²⁸ Cf. Lk. 17:24; Phil. 2:6,10,16; Rev. 1:10. 29 Cf. Acts 2:20; Rom. 13:13; 2 Cor. 6:2.

³⁰ Cf. 1 Cor. 1:8; 5:5; 2 Cor. 1:14; Eph. 4:30; 1 Thess. 5:2: 2 Pet. 3:10-12.

³¹ But, paradoxically, God is going to bring about restoration not only through the judgment of Israel's enemies but also of Israel itself. This paradox found ultimate expression in the Servant Songs of Second Isaiah.

Hope for the fulfilment of the covenant promises within the natural development of historical processes disappeared. The only solution that could restore hope was for a direct intervention by God into history to change the situation.³² It was no longer possible to expect God's actions of salvation to be accomplished solely through the development of the nation's history. In the words of Russell, 'The apocalyptic literature is an example of the adage that "man's extremity is God's opportunity". It is essentially a literature of the oppressed who saw no hope for the nation simply in terms of politics or on the plane of human history.'33 Thus, apocalyptic literature was basically a crisis literature.³⁴

The apocalyptic prophets came to the conclusion that salvation can ultimately come only from Yahweh (cf. Figure 3). This picture soon developed into a more dramatic concept of a new age of existence beyond the present. Thus, Bright states, 'Eschatology here appears in a new dimension. What is awaited is no longer a turning point in history, however dramatic—but a new world (age) beyond history.'35 The apocalyptic

movement became the most important theological movement in Judaism during the Hellenistic period and heavily influenced Jesus and the early Christians.

Apocalyptic Vision



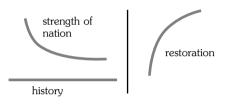


Figure 3

The New Creation

Among the central aspects of the apocalyptic vision is that of the new creation.³⁶ The returning exiles faced great disappointment after most of their expectations for a strong and prosperous Israel were dashed by the hard realities of their historical situation. But within this context arose a vision for a new reality, implying the establishment of a new state of existence—the new creation. The earliest direct reference to the new creation—the 'new heavens and new earth'-occurs in Isaiah 65:17 (cf. 66:22). The verse is located in the visions of Third Isaiah which form part of Old Testament apocalyptic literature and are dated

³² It is here where we see the fundamental difference between prophetic eschatology and apocalyptic eschatology. W. Dumbrell writes, 'Apocalyptic differs from prophetic eschatology (its matrix) only in its emphasis on the coming of the new age, not by historical progression as prophecy may have suggested, but by divine intervention.' The Search for Order: Biblical Eschatology in Focus (Grand Rapids, Michigan: Baker Books, 1994), p. 10.

³³ D. S. Russell, The Method and Message of Jewish Apocalyptic (Philadelphia: Westminster Press, 1964), p. 17.

³⁴ P. D. Hanson, Old Testament Apocalyptic (Nashville, Abingdon Press, 1987), p. 28.

³⁵ A History of Israel, p. 456.

³⁶ The resurrection is an aspect of it.

during the Persian period. For the purposes of our discussion, it is important to reflect on the meaning of the verse.

For Lam about to create new heavens and a new earth:

the former things shall not be remembered

or come to mind

Several important grammatical features need to be noted. The passage focuses attention on the activity of Yahweh. The emphasis on the exclamation hinnî is correctly translated by Watts as, 'Indeed, look at me!'37 The reader is urged to focus on what Yahweh is about to do. The prophet wants to emphasise that the new order will be brought about by Yahweh's actions alone.³⁸ The usage of the verb 'create' brh is exclusively used in the Old Testament for the actions of Yahweh in the sense of creating something new that did not exist before (creatio ex nihilo). It is the same word that is used for God's act of creation in Genesis 1:1.

The participle bwr' also needs careful attention. It can be translated in several ways. Serving as the main verb within the sentence it may be translated as a future tense in English ('I will create'). However, the participle frequently indicates an action that is on the point of occurring, especially in the prophecies of Second and Third Isaiah. Therefore, the NRSV translates it accurately as. 'I am about to create'.39

The text makes a contrast with the 'former things'. It has been argued that the contrast is with the past kingdoms of Israel. 40 However, the clear usage of creation imagery leads us to conclude that the passage should be understood eschatologically, having cosmic undertones. In most eschatological depictions of the future, the description of the new Israel takes the central place, but, as we have seen. Old Testament eschatology sets the new Israel within a new cosmological order of existence. So here too the passage goes on (verses 18 to 25) to employ creation imagery to describe the cosmic transformation that will accompany the restoration of the new Jerusalem. The text envisages a new creation different from that which exists now. In other words, although the vision focuses on the restoration of the new people of God, the cosmic implications of the transformation for the author should be highlighted. The expression 'heaven and earth' is used in the Old Testament to describe the whole created order.41 Therefore, 'earth' refers to the whole world and not just to the land of Palestine.42

Finally, we need to consider what kind of cosmological order is envisaged here. The term 'new' (hds) may be understood in several ways. How-

³⁷ Isaiah 34-66, Word Biblical Commentary (Waco, Texas: Word Books), p. 351.

³⁸ This emphasis already occurs in First and Second Isaiah. The radical nature of what Yahweh is about to do reaches its climax here.

³⁹ Another interesting possibility is to take the participle as expressing the present continuous tense, 'I am creating'.
40 Watts, *Isaiah 34-66*, p. 354

⁴¹ Not totality, since that will include God.

⁴² Contra Watts, Isaiah 34-66, p. 354.

New Testament Eschatology

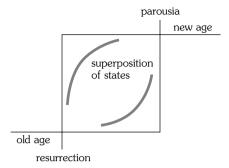


Figure 4

ever, in relation with the verb 'to create' it is best to understand 'new' as referring to something that has not existed before and hence is unknown to this time. This does not necessarily mean that the new creation would have no similarity or resemblance to the old, but the term does imply more than a restoration or a return to an original unspoiled creation.⁴³

New Testament Fulfilment and Expectation

The distinctive character of New Testament eschatology is determined by the conviction that God's decisive eschatological act of salvation is taking place in the new era inaugurated by the coming of Jesus into the world. The preaching of the kingdom of God by Jesus is not only seen as the announcement of a prophetic hope but as the dawn of that king-

dom itself.44 Ridderbos states, 'The coming of the kingdom is the consummation of history, not in the sense of the end of the natural development, but in that of the fulfillment of the time appointed for it by God.'45 In particular, the New Testament authors regarded the death and resurrection of Jesus as the decisive point in history at which God's kingdom, the new form of existence. enters the world. The old age is being replaced by something new. Therefore, the expression 'the latter days' of the Old Testament has become 'these last days',46 and the 'Day of Yahweh' has become the 'Day of the Lord'. The coming of Christ is regarded as the beginning of the new reality envisaged in the apocalyptic vision. 47 Salvation in the New Testament must come from the Lord.

However, this does not mean that the new order of existence has fully replaced the old. The New Testament still speaks about this evil age in which we live, or as the age which is passing away. This gives rise to the eschatological tension between 'the now and the not yet' (or the super-

⁴³ Note Polkinghorne's discussion on creatio ex vetere in Science and Christian Belief: Theological Reflections of a Bottom-Up Thinker (London: SPCK, 1994), pp. 167-168.

⁴⁴ Mk 1·15

⁴⁵ The Coming of the Kingdom (Philadelphia: Presbyterian and Reformed Publishing Company, 1962), p. 44.

⁴⁶ Heb. 1:2; 1 Cor. 10:1; 1 Jn. 2:18.

⁴⁷ Käsemann was right when he said that 'Apocalyptic was the mother of Christian theology'. Cf. New Testament Questions of Today (London: SCM Press, 1969), p. 102.

position of states). 48 There is still a future anticipation for the 'second' coming (parousia) of Christ at which the transformation would be total and complete. It is in this context that the New Testament talks about the passing away of the heavens and the earth and the establishment of a new cosmic order of existence. The material universe is not eternal, but will be replaced with a different order of existence.⁴⁹ The most complete description of this new order of existence is found in 2 Pet 3:10-13 which is based on Isaiah 34:4 and 65:17. Verses 10 and 13 are particularly relevant for us.

48 I have borrowed this expression from quantum physics on the basis of Polkinghorne's discussion. 'Quantum theory permits the mixing together of what was classically immiscible. More technically, it is based on the principle of the superposition of states. In plainer terms, quantum theory not only has states in which a particle is located "here" or it is located "there", but also has states which are a mixture of these two.' Reason and Reality: the Relationship between Science and Reality (London: SPCK, 1991), p. 86. 'Complementarity, as the quantum physicists call this delicate behaviour, is the scientist's equivalent of the theologian's perichoresis, the mutual indwelling of characteristics.' Science and Creation: the Search for Understanding (London: SPCK, 1988), p. 70. These observations by Polkinghorne have huge possibilities for new paradigms of understanding Christian existence in the state of the so-called 'now and not yet'.

49 The NT shared this outlook with the many apocalyptic documents of early Judaism (cf. 1 Enoch 91:16; IQH3:32-36; Apoc.El. 3:82; Jub. 1:29; 1 Enoch 45:4-5; 72:1; 91:16; Sib.Or. 5:212; 2 Apoc.Bar. 32:6; 44:12; 57:2; 4 Ezra 7:75; Bib.Ant. 3:10; etc.). Also see Heb. 1:10-12 (cf. Psalm 102:25-27; Rev. 21:1). However, although I am emphasising the fundamental change envisaged by biblical eschatology for the purposes of the present study, we should also be aware that several passages in the NT point to a transformation with continuity (Polkinhorne's creatio ex vetere). cf. Rom 8:19-23: 1 Cor 15: etc.

But the day of the Lord will come like a thief, and then the heavens will pass away with a loud noise, and the elements will be dissolved with fire, and the earth and everything that is done on it will be disclosed ... But, in accordance with his promise, we wait for new heavens and a new earth, where righteousness is at home.

The passage uses the Old Testament metaphors of the Day of the LORD and the new creation and applies them within the context of coming judgment. A radical cosmic transformation is going to take place in the future. This eschatological transformation is pictured as both sudden and unexpected and not in terms of a gradual process of transformation. The verb parerchomai (used here in the future indicative) is often used in the gospels to refer to the passing away of the heavens and earth.⁵⁰ These passages emphasise the radical discontinuity between the old and the new.51 The author is looking for a new heavens and a new earth in which righteousness dwells. Again, a drastic transformation of the existing order by a direct intervention of God is envisaged in continuity with the Old Testament apocalyptic vision (cf. Figure 4).

Therefore, although the New Testament affirms that a fundamental change has occurred with the death and resurrection of Jesus, it still looks

⁵⁰ Mt. 5:18; 24:35; Mk. 13:31; Lk. 16:17;

⁵¹ R. J. Bauckham, *Jude, 2 Peter*. Word Biblical Commentary (Waco, Texas: Word Books, 1983), p. 326. Kistemaker also comments, 'With the word new, Peter teaches that this new creation comes forth out of the old creation. That is, the old has given birth to the new.' *Peter and Jude*. New Testament Commentary (Welwyn, England: Evangelical Press, 1987), p. 340.

forward to a more comprehensive and all pervading transformation of creation sometime in the future. This cataclysmic event will introduce a new era of everlasting righteousness and blessing.⁵² The biblical text is, therefore, in the final analysis guite optimistic with respect to the future of the cosmos and the human's place within it. The biblical writers employed various symbols and metaphors to indicate that history is moving towards the goal of a 'new creation'. According to apocalyptic eschatology, final redemption of humanity and the universe will occur through a radical intervention into the cosmos by God.

Conclusion

To conclude, it is clear from our observations that when it comes to eschatology. the relationship between science and biblical faith is one of dissonance. Scientific scenarios of a catastrophic end to the universe are incompatible with the divinely promised new creation of the Scriptures. However, this dissonance should not come as a surprise. When one considers the structure of biblical faith—that salvation can only come from God—one should expect dissonance when we compare scientific scenarios of the end with biblical eschatological expectation. Evolutionary development of the universe according to its internal natural processes does not lead to 'paradise', but rather, without radical divine intervention, the universe is heading towards a catastrophe. In contrast, the hope that biblical faith presents is that God will intervene not only to arrest the natural propensitu of the universe towards catastrophe, but also to bring about redemption for the universe and humanity in a 'new creation'.53 Therefore, considered in this light, the dissonance between cosmology and biblical eschatology does not demonstrate incompatibility between the scientific and biblical points of view. Rather it is a case of biblical faith addressing head on the dilemma of the world and the catastrophic scenarios for the future of humanity predicted by cosmology. In other words, in view of cosmological eschatologies, the call to faith and hope is as urgent as ever.

⁵² Cf. Rev. 21, 22.

⁵³ Polkinghorne's comments are to the point, 'The bleak prognosis for the universe puts in question any notion of evolutionary optimism, of a satisfactory fulfilment solely within the confines of the unfolding of present physical process ... An ultimate hope will have to rest in an ultimate reality, that is to say, in the eternal God himself, and not in his creation.' Science and Christian Belief: Theological Reflections of a Bottom-Up Thinker (London: SPCK, 1994), pp. 162-163.