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# Untangling the Cords of Sheol: Dementia and the Eschatology of the Physical Universe

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*Dementia raises important theological questions regarding human identity and hope. In this piece I propose that we understand dementia as an instance of cosmic entropic processes impinging on human neural systems. Theologically, such entropic decay can be seen as death encroaching on life – the cords of Sheol entangling the sufferer’s brain, with devastating consequences. Psalm 88 presents us with a lens through which to reflect on the nature of death encroaching on life, and so the problem that Christian hope needs to address. Resources for dealing with both cosmic entropy and its all-too-human effects can be found in David Wilkinson’s Christian Eschatology and the Physical Universe. He gives an account of space, time and matter that addresses the cosmic futility of entropy, and which can, in turn, ground a meaningful resurrection hope for people with dementia.*

Keywords: dementia, entropy, death, Psalm 88, *Sheol*, eschatology, David Wilkinson, space, time, matter, resurrection

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## Introduction

Dementia raises important questions relating to physical processes and cosmic dis/order as they impinge on the physical systems that sustain human life and cognition. It is a tragic instance of the inevitability of decay and disorder wrapped up in the entropic nature of physical processes and systems.<sup>1</sup> In one sense, this makes dementia not at all a special case, for every physical system is subject to entropic processes: without the imposition of energy and/or information, every complex system tends to disorder – strictly speaking, to a state of energy equilibrium in which the ‘nodes’ of higher energy and greater information dissipate into the system as a whole.<sup>2</sup> We see this in ageing and

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1 I would like to thank a number of people for helpful comments on earlier versions of this paper. Jeff Bishop and the research seminar in bioethics at St Louis University; the participants in the Morling College postgraduate research seminar; Peter Kevern; Erin Sessions; Stephen Williams; Brian Brock; John Swinton; and two anonymous reviewers.

2 Patterson, G. ‘Theology and thermodynamics: in praise of entropy’, *Perspectives on Science and Christian Faith* (2012) 64 4, 242-249. He notes a number of ways in which entropy has been abused in theology, especially in relation to accounts of the effects of the Fall on the physical universe. While Russell’s metaphorical connections between entropy and evil are at times tenuous, his discussion of the theological significance of entropy and the arrow of time is useful. See Russell, R.J. ‘Entropy and evil’, *Zygon* (1984) 19 4, 449-468.

illness in biological organisms, and their eventual death and decay. We see it in the cosmos itself, with the inevitability of our solar system's collapse as the sun runs out of fuel in 10 billion years or so, and the theorised eventual heat death of the universe. But in another sense, dementia is a special case, as it is both a microcosm of this cosmic entropic futility, and a lived anticipation of the dissolution of the self that we face in death.

Others have described well both the neurobiology and the phenomenology of dementia. For my purposes, all we need to recognise is the ways in which dementia is an instance of the loss of order, in a complex system, that disrupts neurological function and a person's experience of themselves as well as others' experience of them. Be the process one of cell-death, or interference with synaptic function, the resulting disruption of neuronal architecture, axonal connections and synapses in particularly important sections of the brain, interferes with memory, affect, cognition and executive functions. In dementia, the cords of *Sheol* entangle the very neural connections that make complex thought, and the personal stories associated with it, possible. Creation's bondage to futility and decay is inscribed on the very persons who inhabit it, and creation's groaning is echoed in their tears, and those of their friends and relatives, as their self slowly dissolves in the acids of dementia. While these may not be stories of loss *simpliciter*, they are stories of loss in which decay anticipates the death that will inevitably come. They are stories that end badly. And that, of course, leaves us with a question. For if the gospel is anything, it is *good news*; and part of what makes it good news is that it is a story of hope. So, in light of such entropic phenomena at both the macro and micro level, what hope is there for the physical universe and we who inhabit it – that is, what *kind* of *eschaton* provides hope for our being rescued from this body (and mind) of decay? In this piece I would like to offer some reflections on that question, drawing on David Wilkinson's work on the physics of the *eschaton*. But first, let us think a little about the nature of death and the kinds of problems to which resurrection and eschatology provide hope.

## Dementia and the cords of Sheol

### ***a. Life and death and their entanglement in Old Testament theology***

Death is a complex phenomenon and has generated some interesting theological reflection. Robert Jenson, for instance, argues that death is necessary for the completion of a person's story, a completion that is required for the story to have any true meaning (positive or negative), with interesting (and troubling) implications for his doctrine of God.<sup>3</sup> Now, it is true that the meaning of stories

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<sup>3</sup> See Jenson, R.W. *Systematic Theology, vol. 1: The Triune God*, Melbourne: Oxford University

cannot be determined without understanding their ending, and that all human stories end in death, a death that can reveal the truth of a life.<sup>4</sup> Furthermore, there are suggestions in Scripture that a life well-lived can be fulfilled in being gathered to the ancestors 'full of years' (e.g., Gen. 25:8; Deut. 34:8). Nonetheless, Jenson's particular application of that to theology proper is problematic, inasmuch as Jesus's death (and the sin that occasioned it) is necessary for God's identity. Be that as it may, my interest here is on the 'dark side' of death, the way that death disrupts human life and calls into question the nature and value of human existence and the possibility of that flourishing-in-*shalom* that constitutes our highest good.<sup>5</sup> 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.<sup>6</sup> It marks the cessation of the personal narrative that identifies us as members of the human community, erasing future possibilities.<sup>7</sup> This dark reality of death needs to be addressed theologically.<sup>8</sup>

When theology explores the steep and dark side of death, it finds not part of life, not a final and fitting event, but an alien, dismembering force... The radical no of death must be felt as a beaked fact which tears the modes and meanings of life, as a radical negation whose very unacceptability challenges theistic faith and theological explication.<sup>9</sup>

Some of the clearest – if darkest – explorations of that perspective on death can be found in the Psalms of Lament, to one of which we now turn.

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Press (2001), pp. 66-72. For a clear and cogent critique of this claim and its implications, see Andrew, M. 'Analogy, being, and time: Hart, Jenson and the Question of Impassibility', (University of Divinity, 2016), 119-123.

4 Pannenberg has made important contributions to this line of thinking in theology, especially in relation to *eschaton* and the meaning of history. See Pannenberg, W. *Systematic Theology, vol.1*, Bromiley, G.W. (trans.), Grand Rapids: Eerdmans (1991), p.257; *Systematic Theology, vol.3*, Bromiley, G.W. (trans.), Grand Rapids: Eerdmans (1998), pp. 531, 630-646.

5 This way of framing the issues is informed by Stanley Grenz's relationally oriented systematics. See Grenz, S.J. *Theology for the Community of God*, Grand Rapids: Eerdmans (1994).

6 *ibid.*, 749, 755-757. See also Jungel, E. *Death: The Riddle and the Mystery*, Edinburgh: Saint Andrew Press (1975), pp. 30- 32.

7 See *ibid.*, pp. 24-25.

8 I should note at this point that Grenz also speaks of death as a vanquished enemy, and so, 'Having lost its ultimacy, death can now carry positive significance.' (Grenz. *op. cit.*, (5), p. 758) While I do not want to deny that, dementia forces us to face more resolutely the dark questions that death and decay raise for us.

9 Collopy, B.J. 'Theology and the darkness of death', *Theological Studies* (1978) 39 1, 22-54: 43. This is in contrast to Jungel, who suggests that it is our attitude to life and inevitable death that gives it such power that it can encroach on life (Jungel *op. cit.*, (6), p. 75). True, death also is essentially connected to sin in both OT and NT thought (*ibid.*, pp. 76-78), something Christ has conclusively dealt with; but it is still a real power that encroaches on life.

Psalm 88 is perhaps the most remorselessly bleak of all the lament Psalms.<sup>10</sup> While it opens by calling on Yahweh as ‘God of my salvation’, that, muted as it is, is the only note of hope in the Psalm.<sup>11</sup> This is not to say that Yahweh is seen as anything other than sovereign Lord, the one who is able to answer prayer. Divine sovereignty is presupposed in both the conceptual content of the Psalm and the work it does as a speech act, for the Psalmist’s entreaties and complaints make no sense and have no force if God is not sovereign, and engaged with God’s people in relationship.<sup>12</sup> Nonetheless, the reference to God as the one who saves the Psalmist is the most positive statement in the Psalm. Unlike all other lament Psalms, there is no ‘pole of praise’ which normally characterises lament, whether that be an element of final resolution or not.<sup>13</sup> This Psalm starts out at night and ends in darkness. In the intervening verses much important theological work is done, including important reflections on the nature of death and the way that it intrudes on life. This is a Psalm that, like the experience of those with dementia, is deeply entangled in the cords of *Sheol*.<sup>14</sup>

The reality of death is seen first, and most obviously, in the language of *Sheol*, the grave, destruction, darkness, forgetfulness and so on: the Psalmist’s life touches *Sheol* (v.3);<sup>15</sup> the Psalmist is reckoned with those who descend to the Pit (v.4); ‘freed’ among the dead,<sup>16</sup> likened to those lying slain in the grave, unremembered (v.5); put in the deepest pit, in deep dark places (v.6). The rhetorical questions of vv.10-12, best understood with petitionary force in speech-act terms, all trade in the language of death (the dead, shades, grave, destruction, land of forgetfulness). And death hovers in the background of much of the rest

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10 It is interesting that, while Collopy never cites Psalm 88, his central metaphor of darkness, and his description of all negations of death strikingly echo the language of the psalm. See Collopy *op. cit.*, (9), 42-50.

11 Here, following the Hebrew of the Masoretic Text; for matters relating to the text and translation of this verse, see the works cited in fn. 13.

12 Harper, G.G. ‘Lament and the sovereignty of God: theological reflections on Psalm 88’, in Barker, K. & Harper, G.G. (eds.) *Finding Lost Words: The Church’s Right To Lament*, Eugene, OR: Wipf & Stock (2017), pp. 80-93.

13 For critique of Westermann’s classic view that the pole of praise is an essential feature of lament psalms (Westermann, C. *Praise and Lament in the Psalms*, Atlanta: John Knox (1981)), see Mendy, G. ‘The theological significance of the psalm of lament’, *American Theological Inquiry* (2015) 8 1, 61-71.

14 For useful treatments of the exegesis of this Psalm, see: Tanner, B.L. deClaisse-Walford, N.L. & Jacobson, R.A. *The Book of Psalms*, The New International commentary on the Old Testament, Grand Rapids: Eerdmans (2014), pp. 668-673; Goldingay, J. *Psalms 42–89*, Grand Rapids: Baker (2007), pp. 642-659; Harper *op. cit.*, (12), pp. 80-93; Laha, R.R. ‘Between text and sermon: Psalm 88’, *Interpretation* (2015) 69 1, 81-84; Longman, T., III *Psalms: An Introduction and Commentary*, Tyndale Old Testament commentaries, Nottingham: IVP (2014), pp. 319-322; Tate, M. ‘Psalm 88’, *Review & Expositor* (1990) 87 1, 91-95; Tate, M.E. *Psalms 51–100*, Dallas: Word (1990), pp. 395-405.

15 Verse 4 in Hebrew; verse numbers will follow English translations.

16 For this, ironic, meaning of *שְׁפָה*, see Tate, M.E. *op. cit.*, (14), pp. 396, 402.

of the Psalm's language, even as the specific language used alludes to death's significance as more than the cessation of physical existence. For the realm of the dead is the land of forgetfulness (v.12b), where people and their deeds cease to play an ongoing role in the formation of the communities in which they once lived. Those who are there are cut off from God's (gracious) hand, no longer the objects of the gracious memory of God (v.5b). They are even outside the worshipping community, excluded from the very possibility of hearing and recounting the saving works of Yahweh (vv.10–12). And each of those elements of the condition of death also characterise the way that death intrudes on life before death – the entangling of the living in the cords of *Sheol*. This is reflected in the language of incapacity: the Psalmist is like a (strong)man without strength (v.4b);<sup>17</sup> overwhelmed (v.7b); shut in and unable to go out (v.8b); with dimmed vision (literally, languishing or darkened eyes, v.9). The Psalmist is beset by weakness, but alienated from those who might help: God, of course; but also companions and neighbours whom God has made distant from the Psalmist (vv.8a, 18a), who has become abominable to them (v.8b). It is no wonder that for this Psalmist, the final, dismal word is 'darkness'.

It is important here to recognise that, while this is a strongly evocative Psalm, redolent with dark imagery, it draws on and reflects a rich theology of life and death that runs through the Psalter and, indeed, through the Old Testament as a whole.<sup>18</sup> This is seen clearly in Leviticus, which seeks to project a view of the world as one governed by both moral and metaphysical order. The world properly aligned is a world of life: of community flourishing in its common life, deeply rooted in a good land of God's promise, reflecting God's creational purposes for bodily human existence, centring on God's presence with them and their access to God and God's mercy in their communal worship life oriented around the Tabernacle and the priestly system associated with it. Anything that disrupts that order is already shadowed by death, whether that be a visible abnormality of the body and its surfaces (*tsara'at* [תַּצְרָאֹת] often mistranslated 'leprosy'), covenant infidelity or moral breach, or accidental association with death (touching a corpse, for instance). Short of death itself, this is physically represented in exclusion from the community's common life, and especially its worship life; for any association with death is an association with that which is the very antithesis of the being of the God of life, the one whom Jesus famously described as the God of the living, and not the dead (Mark 12:27), and so must be excluded from those spaces claimed as God's own and separated as holy for God's own use. This, in turn, reflects the same theological vision as that found in Genesis 2–3, where the place of God's presence is the place of life, exclusion from which is a (re)turn to a realm of disorder and alienation, a sentence of

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17 Note the word play between 'strong man' *geber* (גִּבּוֹר) in v.4 and the grave *qeber* (קֶבֶר) in v.5.

18 Weaver, G.D. 'Senile dementia and a resurrection theology', *Theology Today* (1986) 42 4, 444-456, picks up on this theology in his reflections on Psalm 88 and dementia.

death.<sup>19</sup> Psalm 88 reflects that vision of life.<sup>20</sup> All that disrupts the Psalmist's enjoyment of embodied life, in the created order, in community with God's people, in fellowship with God, enjoying and celebrating God's right and glorious action, already partakes of the world of death. As the Psalmists remind us, our stories may not just end badly in death, but its shadow may fall heavily on many of the last chapters of our lives. *Sheol* doesn't lie tamely at the end of life; its cords can creep over us in the midst of it.

### ***b. Dementia and the cords of Sheol***

Let me bring that back now to the reality of dementia. It is sobering to recognise how much of what the Psalmist laments in Psalm 88 matches the experience of people with dementia and those who care for them. Some of that, it is true, is the result of malignant social psychology:<sup>21</sup> being seen as a horror, even an abomination by friends and neighbours is not something *inherent* in the condition of dementia, but something inflicted on those suffering from it by people and communities who are terrified by the loss of cognitive capacities and recoil from the image of their own mortality seen in the increasingly 'absent' faces of people with dementia. The way that they are then shunned by people they knew, people who could help sustain them and their sense of self even as the neuropathology develops, isolates them and their carers in an increasingly dark and empty social landscape. The disease processes distance the person with dementia from friend and neighbour as eventually they not only struggle to remember friend and neighbour but also lose the capacity to recognise them entirely. But ostracism and growing alienation accelerate and exacerbate this inevitable process, leaving them distant from their communities both prematurely and at greater remove than warranted.

Equally, some of the loss is an inescapable consequence of the disease processes.<sup>22</sup> When memory fades, the capacity to celebrate God's goodness and great deeds for God's people is lost. For people with dementia, there is already no memory of God's great works; there is no praising or giving thanks or con-

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19 Sloane, A. *At Home in a Strange Land: Using the Old Testament in Christian Ethics*, Peabody/Grand Rapids: Hendrickson/Baker (2008), pp. 113-127.

20 Mays, J.L. *Psalms*, Louisville: W/JKP (1994), pp. 282-283.

21 See Swinton, J. *Dementia: Living in the Memories of God*, Grand Rapids: Eerdmans (2012), pp. 106-107.

22 Here I am working with the distinction between *mere difference*, in which social arrangements give rise to disability by way of societies' inability to incorporate people with such differences into meaningful forms of community, and *bad difference* in which some form of disability would be present even in a society that perfectly accommodated the lives of people with these conditions, for which see: Timpe, K. & Cobb, A.D. 'Disability and the theodicy of defeat', *Journal of Analytic Theology* (2017) 5, 100-120. I contend that *bad difference* is an important category, and that both elements of the experience of disability are evident in both Psalm 88 and the lives of people with dementia.

fessing God's *hesed*. Long before their death, the cords of *Sheol* have entangled their cognitive, affective and worshipping selves.<sup>23</sup> And, as is true in the Psalm, there is no light glimmering ahead of them; for people with end-stage dementia their last word, too, is 'darkness'.

This may all seem brutally, mercilessly bleak. But it is important, I think, to give death and its encroaching on life due respect, to be willing to face the darkness square on rather than rushing too quickly to glib and facile hope. And so, let me be clear about two things. First, given the way that dementia compromises someone's ability to function well in relationships, even to engage in worship, they experience a life tainted by death. But second, this in no way means that someone with severe dementia counts as dead, as no longer a person, as someone beyond our moral and spiritual care. They are living persons, with an enduring identity through time, whose life has been colonised by the forces of entropy. For them, death has invaded life.<sup>24</sup> The cords of *Sheol* entangle them – most horribly, in the tangled disruption of their neural systems.

## Dementia and the eschatology of the physical universe

### *David Wilkinson's work – entropic decay and the Christian hope*

Let me now turn to what may seem like an unlikely source of reflection on dementia: a theology of the eschatological future of the physical universe.<sup>25</sup> Elsewhere I have argued that personal identity is sustained even in the face of the apparent dissolution of the self in dementia: God's faithful memory allows for human narrative identity to survive dementia's devastating effects on human cognition and memory.<sup>26</sup> Identity is all well and good, but if this is to provide hope to people affected by dementia, and hope that defeats death's encroaching on life and then ending it, then those memories and stories need to be embodied, and in particular ways. Such a resurrection is no natural out-working of innate human possibilities, but a radical negation of the negations

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23 Here I should note that, while true of end-stage dementia, at earlier stages of the disease's progression, sufferers are often able to engage in praying and singing about matters of faith that elude their discursive memory. This may well be a function of procedural memory, or of deeply embedded habits and practices that have formed their character, and which can be triggered by the right experiences and context – especially when they are treated with dignity and respect and an element of hope. See Swinton. *op. cit.*, (21), esp. chaps 9 & 10.

24 It is worth noting that this is true of all of us, to a greater or lesser extent. For all of us, in the midst of life we are in death. But it is particularly, poignantly, puzzlingly true for people with dementia.

25 Wilkinson, D.A. *Christian Eschatology and the Physical Universe*, London: T & T Clark (2010).

26 See Sloane, A. 'The dissolving self? Dementia and identity in philosophical theology', (this journal).

of death.<sup>27</sup> This, in turn, requires that we think about the nature of the eschatological body.<sup>28</sup> But perhaps such a line of inquiry is profoundly mistaken. Perhaps a concern with an eschatological future for the physical universe and the embodied beings who inhabit it, in which the ravages of entropy overcome, is asking and so seeking to answer the wrong (kind of) question. Leaving aside claims that theology would do better without the outmoded apocalyptic categories that govern much of the biblical witness,<sup>29</sup> it is worth briefly asking whether a concern with the nature of eschatological physicality fails to do justice to the Christological nature of Christian theology, and of eschatology in particular. Rather than speculating on the nature of eschatological bodies, which binds Christian hope too tightly to creational structures, we should join Paul and Jesus in focusing on new forms of community and the perception of others and our relationship with them that anticipate the Kingdom by embodying the Body of Christ. This, in turn, would change our perception of disability and the role it plays in contemporary (Christian) communities in ways that better cohere with the gospel's call to death and new life.<sup>30</sup> But a concern for the physicality of the resurrection need not ignore questions of malignant social psychology, and important strands of biblical eschatology relate precisely to questions of physicality.<sup>31</sup> Physical resurrection must, in turn, be related to God's work in creation. The resurrection of Jesus Christ is both the anticipation of new creation and the vindication of original creation – indeed, that is fundamental to the meaning of the resurrection of Jesus and the way it shapes contemporary life and community.<sup>32</sup> And so, the basic questions stand: what is the nature of the resurrection? How does that ground hope for people with

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27 Collopy *op. cit.*, (9), 50, 53-54.

28 See also Wall, T. 'Resurrection and the natural sciences: some theological insights on sanctification and disability,' *Science and Christian Belief* (2015) 27, 41-58.

29 Such claims come from a number of directions. A typical example is Nürnberger, K. 'Eschatology and entropy: an alternative to Robert John Russell's proposal,' *Zygon* (2012) 47 4, 970-996. He argues that the biblical witness to an eschatological future for the physical universe (including notions of the resurrection of the dead) needs to be jettisoned in light of both biblical scholarship and scientific advances. Detailed refutation of his claims is beyond the scope of this piece, requiring, as it does, assessment of fundamental hermeneutical strategies, theological assumptions and models of the interaction of science and faith. The work of Polkinghorne (Polkinghorne, J.C. *One World: The interaction of science and theology*, Philadelphia: Templeton Foundation Press (2007)), McGrath (McGrath, A.E. *Science & Religion: A New Introduction*, 2nd edn., Malden, MA: Wiley-Blackwell (2010)) and Wilkinson himself, among others, suggest that traditionally orthodox views have greater warrant than Nürnberger's.

30 Brock, B. & Wannewetsch, B. *The Therapy of the Christian Body: A Theological Exposition of Paul's First Letter to the Corinthians, Vol. 2*, Eugene, OR: Cascade (2018).

31 See my discussion above, and Wall *op. cit.*, (28), 51-53, 55-57. Wall mistakenly accepts the notion that the resurrected Christ is somehow disabled, and his discussion of the connection between disability and identity is flawed, but his attempt to address the nature of resurrection bodies and disability is generally helpful.

32 For a compelling argument for this view, see O'Donovan, O. *Resurrection and Moral Order: An Outline for Evangelical Ethics*, 2nd edn., Grand Rapids: Eerdmans (1994).



dementia? What kind of physical system is the new creation which allows for such a hope? David Wilkinson's expertise in both astrophysics and theology makes him well suited to navigate this terrain.

Wilkinson observes that contemporary physics has a relentlessly pessimistic view of the future of the cosmos, something that Christian theology needs to address better than it has to date.<sup>33</sup> He notes Moltmann and Pannenberg's attempts to come to grips with this theologically, but finds them wanting both theologically and scientifically. Theological discussions of the eschatology of the physical universe leave us unsure about the ways the new creation is in continuity and discontinuity with this one. Are there new physical laws? In which case, what continuity is there? If not, how is creation released from its bondage to entropic futility?<sup>34</sup> As he acknowledges, Polkinghorne and Russell both provide important discussions of these matters. Russell's work, drawing on Pannenberg's theology and his own approach to the 'Creative Mutual Interaction' of science and theology, has paid special attention to the nature of time, its relation to eternity, and the way in which the *eschaton* has causative effects here and now in light of the bodily resurrection of Jesus.<sup>35</sup> Polkinghorne is particularly interested in how, as '*creatio ex vetere*', the new creation will be both in continuity and discontinuity with the old, modelled on the resurrection of

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33 Wilkinson *op. cit.*, (25), pp. 7-22. For an earlier discussion focusing on the inadequacies of the scientific eschatologies of Dyson, and Barrow & Tipler, and the need for a specifically *Christian* eschatology, see Davis, J.J. 'Cosmic endgame: theological reflections on recent scientific speculations on the ultimate fate of the universe', *Science and Christian Belief* (1999) 11 1, 15-27. For an interesting Pentecostal perspective that gives a good account of both the nature of entropy and the reality of the orderliness of complex 'emergent' systems in the universe, see Bradnick, D. 'A Pentecostal perspective on entropy, emergent systems, and eschatology', *Zygon* (2008) 43 4, 925-942. In Bradnick's account, emergent systems are the work of the Holy Spirit in creation, proleptic of the coming eschatological Kingdom (934-939). That seems to appropriate the work of continuous creation to the Spirit (which may or may not be sound); more to the point, it conflates creation and new creation, and overemphasises their continuity, thereby failing to do justice to the distinction between them in Scripture, and to the elements of discontinuity as well as continuity between creation and new creation.

34 Wilkinson *op. cit.*, (25), pp. 23-52. For recent discussions of the entropic future of the physical universe, see: Cirkovic, M.M. & Milosevic-Zdjelar, V. 'Three's a crowd: on causes, entropy and physical eschatology', *Foundations of Science* (2004) 9 1, 1-24. I should note that these papers include various hypotheses about the underlying physical and cosmological basis for the asymmetry of entropic processes and the implications (and precise end-point) of cosmic entropy, while agreeing with Wilkinson that the current state of physics envisages an entropically futile end to the universe.

35 Russell, R.J. *Cosmology From Alpha to Omega: The creative mutual interaction of theology and science*, Minneapolis: Fortress (2008), pp. 298-327; *Time in Eternity: Pannenberg, Physics and Eschatology in Creative Mutual Interaction*, Notre Dame, IN: University of Notre Dame Press (2012); 'Eschatology and scientific cosmology: from deadlock to interaction', *Zygon* (2012) 47 4, 997-1014; 'Resurrection, eschatology, and the challenge of Big Bang cosmology', *Interpretation* 2016) 70 1, 48-60.

Jesus, and fulfilling God's loving purposes as creator and redeemer.<sup>36</sup> Wilkinson draws on their work, but presents his own detailed discussion of matter, time and entropy, which will be my focus here.

In addressing these questions, Wilkinson first deals with a range of biblical texts (Isaiah 11; 65; 1 Thess 4-5; Rev. 21; Rom. 8) and draws out a number of implications.<sup>37</sup> While new creation is central to the Bible's portrait of the future of the cosmos, at the very heart of it is God's sovereign power and faithful commitment to creation.<sup>38</sup> This is the ultimate ground of our hope. New creation involves the 'transformation, renewal or purification' of this order, entailing changes to the physical universe, including biology.<sup>39</sup> In this process judgement is essential – the removal of the bad is necessary to the re-creation (and, I would add, the affirmation) of the good. Somehow humans play a crucial role in the fulfilment of the cosmos's eschatological destiny, as does our transformation. Precisely how this works is unclear in the texts, except that Christ (as embodied divine Son) is central to it, as, indeed, is his return as judge. Finally, God is at work in and for the world, both in the long process of things coming to their goal and in a cataclysmic interruption of the normal history of the universe.

Wilkinson rightly pays particular attention to resurrection and cosmology – the former is, of course, a staple of Christian eschatology, but its relationship to the cosmos as a whole is generally neglected.<sup>40</sup> He makes a number of salient points:<sup>41</sup>

1. Hope is based in the action of God, not the continuity of this-worldly systems that are doomed to futility and decay, ending, most probably in cosmic heat death.
2. Matter is transformed – it will not be destroyed or discarded and replaced by a new order – and so God's creational purposes will be vindicated; but this creation will end and the new heavens and earth will be a

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36 Polkinghorne, J. *The Faith of a Physicist: Reflections of a Bottom-Up Thinker*, Minneapolis: Fortress (1994), pp. 162-175; 'Eschatology: some questions and some insights from science', in Welker, M. & Polkinghorne, J. (eds.) *The End of the World and the Ends of God: Science and Theology on Eschatology*, Harrisburg: Trinity Press International (2000), pp. 29-41; *The God of Hope and the End of the World*, New Haven: Yale University Press (2002).

37 Wilkinson, pp. 53-87, esp. pp. 85-87.

38 See also Polkinghorne, *The Faith of a Physicist*, pp. 163, 166; *The God of Hope and the End of the World*, pp. 12, 65, 83, 149.

39 Wilkinson *op. cit.*, (25), p. 86. An interesting example of this neglect can be seen in Sigurdson, O. *Heavenly Bodies: Incarnation, the Gaze, and Embodiment in Christian Theology*, Grand Rapids: Eerdmans (2016). Despite specifically discussing the nature of 'heavenly' (resurrection) bodies (chap.12, 'Of Heavenly Bodies and Divine Cities', pp. 577-599), he neglects the nature of physicality in both the resurrection and the heavenly city.

40 Wilkinson *op. cit.*, (25), pp. 89-114. Clear exceptions to this can be seen in the works of Russell and Polkinghorne cited fn35 & fn36 above.

41 *ibid.*, pp. 111-114.

new beginning, one grounded in the action of the faithful God.

3. God will transform 'not just matter, but matter in relationship to form, mode and context', which will entail a different pattern of 'progress' in the arrow of time – from one of decay (based on entropic processes) to flourishing oriented to re/creational purpose. Thus, the new creation will be temporal, not timelessly eternal. As he states: 'the resurrection appearances of Jesus are about being no longer limited by space-time rather than being totally isolated from it'.<sup>42</sup>
4. We need to hold together continuity and discontinuity between creation and new creation in a dynamic tension.<sup>43</sup>
5. The Spirit plays a crucial role in transformation, both of individuals (in moral and spiritual change) but also cosmically in light of the groaning of creation between creation and new creation.

The resurrection of the body is central to individual and communal eschatology, but this, in turn, raises two further questions: what is the nature of space and time in the new creation?<sup>44</sup> What is the nature of matter?<sup>45</sup> He claims that personal existence requires narrative descriptions, which, in turn, entail time.<sup>46</sup> Continuity and discontinuity between time in creation and new creation can be maintained by affirming:

- Time is real in both creation and new creation
- There is decoupling of time and decay in new creation
- Time is not limiting in new creation, in the same way that it is limiting in this creation.<sup>47</sup>

This means, in turn, that 'eternity' is not timeless, thus allowing both history and temporality to have value. God's experience of time may involve more than one time-dimension (which fits with some cosmological models of the early universe which require multiple dimensions of space and time that 'collapse' into our 3+1 dimensions). Furthermore, Wilkinson asserts: 'If persons are going to exist in new creation, then we have seen that space and time seem to be necessary to maintain personal relationship.'<sup>48</sup> Hence: 'While the flow of time is coupled with the experience of both growth and decay in this creation,

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42 *ibid.*, p. 113.

43 Note that this draws on the work of Polkinghorne *The Faith of a Physicist*, pp. 166-170; *The God of Hope and the End of the World*, pp. 113-116, 149.

44 Wilkinson *op. cit.*, (25), pp. 115-136.

45 *ibid.*, pp.137-157.

46 For more on this, see my 'The Dissolving Self?'

47 Wilkinson *op. cit.*, (25), p. 134.

48 *ibid.*, p. 135.

we suggest that in new creation that the flow of time is characterized only by growth and that space-time is real but not limiting in the same way as in this creation.<sup>49</sup>

But given the kinds of beings we are, this entails matter. Such matter is neither atemporal nor temporary. Indeed, I would suggest that atemporal matter is conceptually incoherent given that essential to material existence is locatedness in both space and time. But equally, given that new creation bodies are imperishable and incorruptible, material beings in the new creation will not cease to be. This, clearly, is a different order of matter given that the matter of the new creation is everlastingly located in space and time; but it is matter nonetheless. This brings Wilkinson back, once more, to matters of continuity and discontinuity, this time by way of resurrection. While in the resurrection matter will be transformed so as to be imperishable and incorruptible, 'It may not be the atoms themselves that are transformed into a different kind of matter with different kinds of fundamental particles. It may be that the atoms find themselves in a different context and web of relationships.'<sup>50</sup> It is interesting for our purposes that he notes the issues this raises in relation to people with disabilities: what will the level of continuity be for someone who dies with Alzheimer's? Too great an emphasis on continuity ignores the realities of pain and decay and death and the hope for physical transformation. But too great an emphasis on discontinuity (in eschatological healing) runs the risk of dehumanising people with disability.<sup>51</sup> In this regard the phenomenon of the risen Jesus is important: 'It is significant that the risen Jesus still had the marks of the crucifixion. Those marks are part of his identity, but they become symbols of glorification and transformation rather than pain and death.'<sup>52</sup> The scars of our history (be they physical, neural, or psychological) are not erased; but nor are they permanent limitations that determine our future possibilities. They are constitutive elements of the stories by which we are identified.<sup>53</sup>

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49 *ibid.*, p. 187. This articulation, while less specific than Russell's (for which see Russell *Cosmology From Alpha to Omega*, p. 313; *Time in Eternity*; 'Eschatology and scientific cosmology', 1007-1008; 'Resurrection, eschatology, and the challenge of Big Bang cosmology', 58-60), does not require the affirmation of Pannenberg's problematic concept of the relation between time and eternity. See Polkinghorne *The God of Hope and the End of the World*, pp.117-120, for a brief critique of Pannenberg's view of eternity, and pp.132-136 for reflections on the pervasive presence of God and growth in the new cosmos.

50 Wilkinson *op. cit.*, (25), p. 157.

51 *ibid.*, pp. 146, 148.

52 *ibid.*, p. 148.

53 See also my brief treatment in Sloane, A. *Vulnerability and Care: Christian Reflections on the Philosophy of Medicine*, London: Bloomsbury T&T Clark (2016), pp. 104-105.

## Dementia, embodiment and a Christian future

Wilkinson's work on the physics of new creation takes us a long way towards our goal of understanding the nature of the bodies we will be in the *eschaton* and how that provides hope for people suffering with dementia. But questions remain. The biggest question in my mind is how biological life, which *requires* the entropic processes of consumption and decay, can become immortal rather than mortal. *That* it will do so is given to us in the gospel; we glimpse possibilities of that future in the resurrection of Jesus in which the selfsame flesh is raised imperishable and glorious, and identifiably that of Jesus.<sup>54</sup> Given the possibility that matter as we know it, with the same fundamental particles and forces, may be reconstituted by way of 'a different context and web of relationships', it may be that a different way of God relating to (new) creation may be the mechanism by which a new physics and biology are brought into being and sustained. Perhaps space and time and the unfolding of physical processes in it will be upheld by God in such a way as to ensure that not only are we immune to decay, but that predation is no more – indeed, that life feeding on death becomes a thing of the past.<sup>55</sup> One possible mechanism is the constant input of both information and energy from God into the cosmos, thereby forestalling the kind of entropic disorganisation of biological systems seen in dementia, disease and even ageing.

For that to be the case, we would need to surrender the notion that the *eschaton* is a static system of completed perfection, in favour of a notion of ever-growing perfection in an indefinitely expanding universe, one in which, indeed, human capacities might also be ever-expanding, while always finite.<sup>56</sup> This would have the clear advantage of addressing one of the key problems in dementia: namely, information storage and transmission. A key phenomenon in dementia is the loss of neural capacity to store, retrieve and act on the basis of information in the form of memory. Information is progressively lost, until the very physical system that bears it is deconstituted in death, leading to the

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54 One difference between Jesus's resurrection and ours, of course, is that Jesus's dead body was the body that was raised, and that the matter that was transformed was, in the main, comprised of the same molecules as the flesh that was buried (hence the importance of 'you will not let your holy one see corruption', Acts 2:27). That will not be the case for (most of) us, for our bodies *will* have seen corruption and be dispersed and then incorporated into the bodies of other organisms, including other humans. Ours will be a physical and bodily resurrection, but not of the selfsame flesh. This reinforces the need to develop an account of identity that does not rely on strict bodily continuity – for which see my discussion in 'The Dissolving Self?.'

55 I suspect that one of the functions of the Levitical food laws is to witness to an ontological order in which life's dependence on death is perceived to be less than ideal. This need not entail a vegetarian ideal, as that still requires a feeding on death, even if plant death. It does reinforce the impression that the original creation was eschatologically oriented, requiring a transformation of physical order irrespective of the fall of humanity.

56 See also Polkinghorne *The Faith of a Physicist*, p. 170; *The God of Hope and the End of the World*, pp. 117-121.

loss of that information from space and time. This is a specific form of a general and insuperable problem in the physical universe as we now know it: signal decay. Resurrection requires both the regathering of that lost information and its restoration to the person, and the indefinite maintenance of the biological systems that enable thought and affection and will and delight and relationships and the like. And this will be an integral part of a new creational order in which God's dynamic engagement with the cosmos provides the information and energy that ensure the sustaining of signals that might otherwise be lost.

Something along these lines seems to be implied in Aquinas' understanding of the pre-fallen physicality of Adam as being sustained by an infusion of divine grace such that his flesh was not subject to infirmity as our bodies are.<sup>57</sup> Now, the *eschaton* does not consist of a return to Eden; it is a new creation, not a mere restoration of this one, as evident in the suggestion that the very possibility of sin and death will be past, that those raised in glory will share the likeness of the Last Adam, not the First (1 Cor. 15:42-49). Nonetheless, this thought might connect with what we see in the images of the new creation in which God will be all in all, and God's glory floods the new Jerusalem with light. Perhaps, just as the earth will be full of the knowledge of Yahweh as the waters cover the (now absent!) sea, so God's gracious presence will so permeate the physical universe as to sustain all things without decay. If that were the case, then God would be providing both the energy and the information required to ensure that no physical system – including the bodies of those raised with Christ – would see corruption, indeed, that we might be capable of indefinite growth and development without death. Having reclaimed the fragmented memories of those who suffer dementia, along with the scattered bodies of all who have died in Christ, having demonstrated God's own grace and power in reconstituting us as ourselves, sinless and immortal and glorious, God will then ensure that the only stories to tell are stories of God's grace. They will be stories in which we celebrate that goodness and dwell in it. For those stories that end so badly in time as we know it, will continue, by God's grace and power in the resurrection to unfold in a new order of space and time in a new heavens and earth.

Now, let me be clear: much of this is highly speculative. We must acknowledge that we don't have full epistemic access to the conditions of the new heavens and new earth. Indeed, I suspect that just as flesh and blood (that is, perishable, weak, death-bound human physicality) cannot inherit the Kingdom of God (1 Cor. 15:50), neither can it fully understand it. But it can receive from the Lord what has also been passed on to his people: that is to say, we can join with Wilkinson in reflecting on that which has been given to us in the eschato-

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57 Romero, M.J., 'Aquinas on the *corporis infirmitas*: broken flesh and the grammar of grace', in Brock, B. & Swinton, J. (eds.) *Disability in the Christian Tradition: A Reader*, Grand Rapids: Eerdmans (2012), pp. 101-151: pp. 106-107.

logical images in Scripture and its witness to Jesus Christ as risen.

One of the interesting features of Luke's resurrection narratives is a puzzling epistemic hiddenness and access: the disciples on the Emmaus road did not recognise Jesus until Jesus allowed it. At that point they realised that the one with whom they had been speaking about their supposedly dashed eschatological expectations was the selfsame one who had fulfilled them. The selfsame one whose body had been subject to the apparent finality of entropic decay in death, but who in the power of the Spirit – the Spirit of the living God, the Lord of life – had conquered death and wound back the inexorable process of disorder. This was not winding back time as such, three days had passed, after all, but *in time* reversing the arrow of entropy. More than that, it was raising, in fact, that very flesh from the clutches of *Sheol*, the force and fate of death that encroaches so readily on frail human life, and appearing bodily in time, in fellowship with his people in space, the living anticipation of that order in which wolves lie down with lambs.

And so, for people who suffer with dementia, there is this hope: that the cords of *Sheol* that encompass them in body and mind might be untangled, liberating them to new life. No longer ironically 'free' in decay, they will know the true freedom of those whom Christ has set free. They will both remember and be remembered truly, not alienated from the communities that might otherwise sustain them, but enjoying the fullness of embodied social life for which they were created, and contributing to the ever-growing richness of the restored and renewed human community. Having been remembered by the God of their salvation, they will join with all of God's people in the celebration of the richness of God's grace, proclaiming God's *hesed* and saving deeds even as they enjoy their fruits. Having faced the dreadful darkness of the end of their story in this realm of time and space, a darkness shared by their saving Lord, they will share his triumph over darkness and dwell in unending light. The desperate prayer and yearning hope of Psalm 88 will finally be answered for them, as for all people.

Precisely *how* it will work is beyond our epistemic access, but what we know is this. Just as Jesus shared this frail, mortal flesh, so we will share in the likeness of his perfect, deathless body. It will be bodily and, therefore, it will be biological, if a different order of *bios* to what we now know. In that *bios* they can be assured that nothing that matters will be lost – either from the past or into the future. They will be recognisably *themselves* – indeed, they will *recognise themselves* fully – in such a way that even dementia (which seemed to be nothing but loss) is still tragic, but now overcome and redeemed and perhaps even somehow made meaningful by God's incomprehensible transforming grace. Those whose future seemed brutally bleak – no, those whose stories ended in bleak darkness – will have a future of untrammelled glory, on which no shadow of mortal change will fall. For God's transforming, sustaining, new-creational life-giving power and presence will ensure that their biology will only grow,

not decay, and their neural systems will enjoy the rich complexity that enables memory and meaningful storytelling, especially the ongoing stories that celebrate the faithful mercies of God that constitute and reconstitute our identities.<sup>58</sup> And in these stories there will be no more tears – no decay, suffering or death – only delight in each other, ourselves, the world of new creation and the Triune God whose joy will be ours.

## Conclusion

People suffering with dementia face a dismal end, one in which the entropic forces that we so desperately try to keep at bay encroach on their existence, entangling their living minds in the cords of *Sheol*. It is important that we not flinch from this harsh reality, that we allow the beaked fact of death-in-life to tear deeply, rather than rushing too quickly to resurrection hope. Far from enhancing it, such glib passing over the harsh realities that some of us may face only serves to dull the glory of the resurrection and mute the hope of the last trumpet. But having seen it in all its darkness, we see more clearly the glory of Jesus's victory over death. We see the end beyond the end and know hope. Even seemingly abstruse reflections on the nature of space and time and matter in the new heavens and the new earth contribute to the hope we have to offer. Recognising that resurrection hope requires not just transformed flesh, but a transformed creation of which that flesh is a part, grounds our hope in incorruptible resurrection life. That in turn, provides a hope for a future for people with dementia as resurrected selves with coherent narrative identities. But equally, the dismal realities of dementia have something to teach philosophical theology. It adds weight to the call to theologically reflect on the nature of the

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58 Let me note that, while *theosis* may seem to provide the theological resources we need at this point (so Polkinghorne *The Faith of a Physicist*, p. 168; *The God of Hope and the End of the World*, pp. 114-115; Augustine, D.C. 'Image, Spirit and theosis: imaging God in an image-distorting world' in Jones, B.F. & Barbeau, J.W. (eds.) *The Image of God in an Image Driven Age: Explorations in Theological Anthropology*, Downers Grove: IVP Academic (2016), pp. 173-188.), the notion receives scant support in Scripture. Commentators largely see 2 Peter 1:4 as a reference to divine qualities, either moral in view of escaping the corruption of the world (Davids, P.H. *The Letters of 2 Peter and Jude*, Grand Rapids: Eerdmans (2006), pp. 172-176; Moo, D.J. *2 Peter, Jude*, NIVAC, Grand Rapids: Zondervan (1996), pp. 43-44.), or ontological in view of the focus on eschatological hope (Bauckham, R. *Jude, 2 Peter*, Waco: Word (1983), pp. 179-182.), or both (Skaggs, R. *The Pentecostal Commentary on 2 Peter and Jude*, London: T&T Clark (2004), pp. 97-98.), rather than sharing in the divine being, as in the classical Orthodox notion of *theosis* or divinisation. Harink, on the other hand, is sympathetic to the Orthodox tradition's notion that human destiny involves full *koinonia* with the divine nature (Harink, D. *1 and 2 Peter*, Grand Rapids: Brazos (2009), pp. 139-145.) Admittedly, this is in Christ and by means of the Holy Spirit, such that we are still creatures (and so matter and nature are not disparaged). Thus, we do not share the divine *essence*, but do participate in God's own eternal life (p.143), and so we 'share in his [God's] glory and excellence and therefore his incorruptibility' (p.145). It seems to me that the Jewish background to the language, and the rhetoric of the passage, favour the majority view of the commentators; even so, it does not do the requisite work here.



*eschaton* and the kind of new creation it has to be if the gospel is to provide a sure and certain hope of the resurrection of these persons to people with dementia and those who love and care for them. For the God who made us has promised to bring all things to their glorious goal, and we will be raised glorious and incorruptible in a new heavens and a new earth in which the very processes of disorder and decay so evident in dementia are brought to an end, and all that matters in our stories will be reclaimed by God and made our very own, refreshed by the grace of God. For those stories that end so badly in time as we know it, will continue, by God's grace and power in the resurrection in a new heavens and earth, in time as we don't know it, and space as we can't imagine it.

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