3 | Life

Astrobiology and theology are each concerned with life, even if they approach it in different ways. In this chapter, we explore those congruences and differences. In doing so, more than in any other chapter, we will find theology offering philosophical resources that may aid the scientist in her quest to understand life and its qualities. Moreover, in theological traditions of thinking about analogy, our sources also offer a deep and well-considered approach to how we might speak of many different things as living, but not all in an identical way.

Biology is focused on measurement and external assessment; theology is concerned with the experience of life from the inside, and with its value and meaning, in a way that goes beyond the professional concerns of the scientist. However, while biology and theology approach life differently, we can take those differences too far. Both disciplines address *life*, with no fallacy of equivocation there. Biology has more than molecules in view: we cannot understand life without reference to organs and organisms, and indeed to community, and to dwelling in an environment. Terrence Deacon points this out in relation to something as seemingly simply chemical as haemoglobin.[1] We can treat it in purely chemical terms, and that is

[1] Terrence W. Deacon, 'Emergence: The Hole and the Wheel's Hub', in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and P. C. W Davies (Oxford: Oxford University Press, 2006), 111–50. On the phenomenal unlikeliness of any particular protein sequence ever existing, consider an analysis by Stuart Kaufmann. Imagine a protein consisting of two hundred units, each of which could be one of the familiar twenty amino acids. The shortest period in which anything can happen is the Planck time of 10^{-43} second,

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indispensable, but it is not the whole story, not even for the scientist. We can also ask why such a molecule, enormously complex as it is, should occur in the world, and not some other arrangement of amino acids of equal chemical validity. To understand why there is haemoglobin in the world at all we need to understand it within the wider order of things. That takes in how this molecule functions presently within the physiological whole of the organism in its environment; it also takes in the history of how evolutionary processes have placed this particular molecule in nature, whittling down the 'space' of conceivable options to this particular configuration.

Biology's concern with life, then, cannot be reduced to genes and molecules without missing much of prime scientific interest. Nor should we say that theology attends to life only at a distance from biology, since theology and religion are profoundly concerned with flesh, birth, and death, among other themes. One only has to recall the role of the church in the development of the hospice movement, with figures such as Cicely Saunders and the All Saints' Sisters of the Poor. Many writers have commented that to the same extent that someone attends to the doctrine of the Incarnation, he or she should be invested in the provision of good drains.

Both theology and biology attend to life. At least sometimes, the study of biology makes use of categories familiar to the theologian, such as intention, form, or desire. Conversely, the study of theology often requires us to think concretely about the nature of this 'flesh', and its life. This has not always been obvious on either side. Mary Midgley, among others, observed the molecular-focussed biology of the mid- to late twentieth century, and pointed to the spectacle of biology – the

the universe is about 10^{17} seconds old, and the visible universe contains perhaps 10^{80} atoms. Even if all those atoms had been 'doing nothing since the Big Bang except making proteins in parallel at every tick of the Planck time clock', it would still take 10^{39} times the current age of the universe 'to make all the possible proteins of the length of 200 amino acids, *just once*' (*A World beyond Physics: The Emergence and Evolution of Life* (Oxford: Oxford University Press, 2019), 3). That it should come to be that any particular protein is routinely synthesised by a cell, compared to the unfathomably large number that are not, is a fact of stupefying specificity.

science of *bios* (life) – trying its 'damnedest to reduce life's distinctive patterns to ones found in things that are lifeless'.[2] Similarly, traditions of theology have not always shown interest in biology, or even in the category of life. Note, for example, how many reference works in theology include no entry on life: we are more likely to find an entry on 'eternal life' than on 'life' in a more biological sense.[3]

A proper concern with life requires that the theologian attend to what the scientist has to say. At the same time, they should be reluctant to cede the study of life in its entirety to biologists, as if life belonged primarily to natural science and only derivatively beyond that, as a borrowed term. I disagree, therefore, with the judgment of Holmes Rolston III that 'Life is literally a biological term but extend[s] by metaphor across a spectrum of key concepts in philosophy and religion'.[4] Not so.

Definitions of Life

Definitions of life are important for astrobiologists, not least as a guide for what to look for.[5] NASA has set the running in recent

[2] Mary Midgley, *The Solitary Self: Darwin and the Selfish Gene* (Durham: Acumen, 2010), 22. A return from this position is discussed in Daniel J. Nicholson, 'The Return of the Organism as a Fundamental Explanatory Concept in Biology', *Philosophy Compass* 9, no. 5 (May 2014): 347–59.

[3] We find no entry on 'life', for instance, in Jean-Yves Lacoste's three-volume *Encyclopaedia of Christian Theology* (London: Routledge, 2004), nor in the *Oxford Dictionary of the Christian Church* up to the third edition (Oxford: Oxford University Press, 1st ed. 1957, 3rd ed. 2005), although I have supplied one for the fourth. The *Anchor Bible Dictionary* contains entries on the 'tree of life', and one on the 'author of life', but none on life as such. The *New and Enlarged Handbook of Christian Theology* of 2003 stands out (Nashville, TN: Abingdon Press), edited by Donald W. Musser and Joseph L. Price, with an article on life by Daniel C. Maguire (306–7).

[4] Holmes Rolston III, 'Life, Biological Aspects', in *Encyclopedia of Science and Religion*, ed. J. Wentzel Van Huyssteen (New York: Macmillan Reference, 2003), 527.

[5] Steven A. Benner, 'Defining Life', *Astrobiology* 10, no. 10 (December 2010): 1021–30; Carol E. Cleland, *The Quest for a Universal Theory of Life: Searching for Life as We Don't Know It* (Cambridge: Cambridge University Press, 2020). Cleland has

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years, describing life as 'a self-sustaining chemical system capable of Darwinian evolution'. While the theologian might well find such scientific definitions of life lacking, she also has theological reasons for humility and forbearance. Life in its fullest and truest sense is ascribed properly to God, whose life inexpressibly surpasses that of any creature. If we view life as a creaturely likeness to something truly divine, we may not be surprised to find it difficult to fathom.

As a guide for spotting something, definitions of life are more difficult to set out than one might expect. In searching for life elsewhere in the universe, we want a definition that touches upon the essence of life, but we currently have only the experience of life on one planet to go on. Perhaps there are no sufficient conditions for being alive, and even necessary conditions may prove slippery. In that case, we might want to approach the matter in terms of 'family resemblance,' as put forward by Ludwig Wittgenstein. In this way we could identify a cluster of characteristics, many or most of which might be found in each living thing, even though any one of them could be missing.[6] It is possible, given a sufficiently rich list, that we could avoid too many false positives or negatives.[7] Theology has its own history of thinking about life (even if reference works suggest otherwise), some of which may be of use to the scientist. Returning to NASA's definition – 'a self-sustaining chemical system capable of Darwinian evolution' – the theologian might raise an eyebrow at both 'chemical system' and 'capable of Darwinian evolution'. Life is said of both God and angels,

anthologised a wide range of discussions of the nature of life, with Mark A. Bedau, in *The Nature of Life: Classical and Contemporary Perspectives from Philosophy and Science* (Cambridge: Cambridge University Press, 2010). Lucas John Mix, who has written on astrobiology from a theological perspective, addresses life more generally in *Life Concepts from Aristotle to Darwin: On Vegetable Souls* (Cambridge: Palgrave Macmillan, 2018).

[6] Ludwig Wittgenstein, *Philosophical Investigations: The German Text, with a Revised English Translation*, trans. G. E. M. Anscombe, 3rd ed. (Oxford: Blackwell, 2001), I.65, 27.

[7] Edward N. Trifonov surveyed 123 definitions of life, and suggested 'nine groups of defining terms' in 'Vocabulary of Definitions of Life Suggests a Definition', *Journal of Biomolecular Structure and Dynamics* 29, no. 2 (October 2011): 259–66.

neither of which are 'chemical systems', nor 'capable of Darwinian evolution'. In one sense, the point hardly matters: it is not the purview of NASA to think about either God or angels. The concern, however, can be illuminating, since from a theological perspective neither evolution nor chemistry are definitive of life as such.

Take the idea of digital or 'artificial' intelligence, either produced *de novo* by some other intelligent life-form, or as a state to which earlier, carbon-based life has migrated: the view (which I find far-fetched) that human memory and consciousness could be 'uploaded' onto some sort of computer system. Such putative post-biological life may not reproduce, or it may do so in a non-Darwinian way, but that would not prevent it from being alive. Again, angels offer a useful thought experiment. If they either cannot or do not reproduce, that would not prevent them from being alive.[8] Indeed, some biological organisms are alive while also standing outside an evolutionary pathway. Sterile hybrids, such as mules or hinnies, are one example. If we are going to invoke evolution, then we should recognise that it characterises the past – and how something has come to be as it is – rather than the present or the future. Life, perhaps, always comes about by evolution, but it need not later be capable of evolution itself: it makes more sense to say that a living thing must have had parents than to say that it must be capable of having offspring. Here the discussion might move into the sort of ethical or political register familiar to the theologian, who may be wary of any definition of life that would exclude from its scope (even if only implicitly) anyone who is unable to bear children congenitally or on account of injury.

Turning to 'chemical system', while an imagined digital life would exist on circuits made of chemicals – silicon and various rare metals, perhaps – the theologian familiar with Aristotle might want to point out that the life it sustains would not be grounded primarily in the reactions of a 'chemical system'. The direct underlying substrate

[8] If that is what we are to understand by the statement that they 'neither marry nor are given in marriage' in Matt. 22.30.

for such life could be silicon-as-logic-gates, or the code that runs on those logic gates. As a parallel, consider that the words on this page are composed more fundamentally of letters than they are of ink, not least because the letters are indispensable for writing, but they can be realised equally well either in ink or in pixels. The scholastic theologian would comment that life is inherently a formal category, not a material one, such that the nature of the material or 'stuff' out of which it is constituted is strictly secondary.[9] The essence of life lies in the pattern, we might say, not in that which is patterned. That is not to deny that the life we are talking about is a phenomenon in matter; it is just to insist that the life lies in how the matter is, rather than in its materiality. Again, as a question of form, life is definitively one of those features that rests in the relation of the parts, and is destroyed when the parts are no longer conditioned each by the others.

This is the territory of hylomorphism: the distinction between form (that which emerges and coordinates) and matter (that out of which it emerges, and that which is coordinated). Life is formal: it is a property of the cohering and emerging whole. As formal, it is realised in matter but underdetermined as to what sort of 'matter' – what sort of substrate – that involves. It can be a chemical system, which is the only kind of substrate we know, but in theory it could be some other kind of system, such as a digital one. Some writers on artificial intelligence have suggested that the majority of intelligent extraterrestrial life, if it exists, would be in the sort of 'post-biological' state mentioned above: digital, perhaps, or something else that lies beyond our imagination.[10] The theologian need not be convinced by such suggestions, but they illustrate that a tradition of philosophy of which theologians have often been custodians – the Aristotelian

[9] The category of form aligns closely with definitions for life – including elements such as movement or the processing of information, for instance – while the category of matter aligns with the conditions for life: that *out of which* life might emerge.

[10] Susan Schneider, 'Superintelligent AI and the Postbiological Cosmos Approach', in *What Is Life? On Earth and Beyond*, ed. Andreas Losch (Cambridge: Cambridge University Press, 2017), 178–98.

distinction between form and matter – offers a good deal for the analysis of life. Even just among chemically based life (my focus), this distinction reminds us that formal concepts such as information and thermodynamics lie at the heart of what life consists in, and that they can be realised in different substrates or settings.

In this way, while the theologian might criticise existing definitions of life, her critique can play a positive role, offering additional resources for thinking about the nature of life, drawn from the riches of theological traditions. In this section, I will consider two additional philosophical resources of this kind that are familiar to theology: the relation of life to self-preservation, and to intentional self-movement.

Life, Self-Preservation, and Movement

To approach life in terms of self-preservation is to observe that life is intrinsically orientated towards life, and its continuance.[11] Among philosophical sources, we might consider Cicero: 'Every natural organism aims at being its own preserver, so as to secure its safety and also its preservation true to its specific type.'[12] Augustine also took this dynamic to be axiomatic about life:

> Mere existence is desirable in virtue of a kind of natural property. So much so that even those who are wretched are for this very reason unwilling to die … Why, even the irrational animals, from the immense dragons down to the tiniest worms, who are not endowed with the capacity to think on these matters, show that they wish to

[11] We find this expressed across a great many philosophical and theological sources, as we will see, but also in domestic settings and rituals, such as the tendency for toasts to refer to the preservation and perpetuation of life, whether *salud, salute*, *santé*,or *Gesondheid* ('health') or, perhaps even more explicitly, *l'chaim* ('to life' or 'for life'). Self-preservation is gestured towards by the 'self-sustaining' element in the NASA definition, although my instinct is to say that this is offered primarily with metabolic elements in mind.

[12] Marcus Tullius Cicero, *De Finibus Bonorum et Malorum*, trans. Harris Rackham, 2nd ed. (Cambridge, MA: Harvard University Press, 1931), VI.16, 319.

> exist and to avoid extinction. They show this by taking every possible action to escape destruction. And then there are the trees and shrubs. They have no perception to enable them to avoid danger by any immediate visible movement … [and yet, they also act so as to] preserve their existence.[13]

We find a similar emphasis in Aquinas. Expounding the idea that the first and fundamental object of practical or moral reason is the search for that which is good, he considered three ways in which this can apply to human beings: that which applies to us solely as rational beings (such as 'a natural inclination to know the truth about God, and to live in society'), that which applies to us more broadly as animals (including propagation and the care for offspring), and that which applies to everything. Significantly for our purposes, Aquinas articulated the last of these in terms of self-preservation: 'in the human being there is first of all an inclination to good in accordance with the nature which he has in common with all substances: inasmuch as every substance seeks the preservation of its own being, according to its nature'.[14] As he puts it in the *Summa Contra Gentiles*, 'every thing loves its own being and desires its preservation, an indication of which is the fact that every thing resists its own dissolution.'[15] In a sense, that applies even to inanimate things ('all substances'), since something like self-preservation is fundamental to any formed thing. Even a vase is able, by virtue of its form, to push back against onslaughts that would challenge its integrity. In another sense, however, this applies particularly to life, which is why Aquinas would see living things as the best examples of what we mean by

[13] Augustine, *City of God*, 11.27.1, translation from *Concerning the City of God against the Pagans*, ed. G. R. Evans, trans. Henry Bettenson (London: Penguin, 2003), with a parallel in Augustine, 'Literal Meaning of Genesis', in *On Genesis*, ed. John E. Rotelle, trans. Edmund Hill (Hyde Park, NY: New City Press, 2002), 157–581, III.16.25, p. 247.

[14] *ST* II-I.94.2, with another discussion in II-I.85.6.

[15] *Summa Contra Gentiles* (hereafter *SCG*)II.41.5.

a 'substance'. With life, existence and self-preservation become an intention.[16]

Many of these ideas spring from Aristotle, for whom life was crucially characterised by an impetus to remain. He approached that in part under the concept of *entelécheia*, which Joe Sachs (in his 2011 translation of Aristotle's *Physics*) renders as 'being-at-work-staying-the-same'.[17] With our appreciation of both homeostasis and immune systems, modern science has made us even more acutely aware of how right Aristotle was to see, at the heart of life, this tendency for living things to resist the buffeting onslaught of their environment, making internally led adjustments to iron out perturbations and withstand insults.[18]

If we turn to consider movement as a definitive property of live, Aristotle again stands as the well-spring. Movement lies at the root of his distinction between animate and inanimate. To be living is to be animate, or self-animated: to have *within oneself* the principle, or source, of one's own movement.[19] A round stone can roll, but only because it is pushed, or drawn by gravity down a slope. In contrast, a mouse – or even moss – can move itself. This capacity for self-movement renders it animate: it reveals or involves possession of a soul, or *anima*. 'Soul', here, obviously, means something different from its common theological or popular sense. In the Aristotelian tradition, to speak of a soul is not to talk about something extraneous to a material thing, nor of something inherently immortal, but to say that the form of such a thing – what defines it, and what it adds up to as a coordinated whole – is characterised by self-initiated movement.

Developments in our understandings of metabolism over the past century or so again suggest that Aristotle had recognised in

[16] Kauffman, *A World beyond Physics*.

[17] Aristotle, *Aristotle's Physics: A Guided Study*, ed. and trans. Joe Sachs (New Brunswick, NJ: Rutgers University Press, 2011), 245.

[18] Lee Smolin discusses this feature life, which calls the ability to withstand 'bumps', in *The Life of the Cosmos* (Oxford: Oxford University Press, 1997), 155.

[19] Aristotle, *De Anima* I.2, where he writes that the two marks that, above all, distinguish life from non-life are movement and sensation.

movement something more profoundly characteristic of life than he could have known. Not only do living things move spatially, they also move internally. The metabolic warp and weft of life is characterised by movement: atoms moving through cycles of synthesis and degradation, molecules moving from one internal cellular partition to another, and ions flowing through channels. Internally, then, as well as externally, Aristotle's association of life with movement – duly extrapolated to take in biochemistry – seized upon something truly fundamental to life.

In following Aristotle by associating life with movement, theologians are not grafting a purely philosophical idea onto a theological system that otherwise knew nothing of it. The authors of both Old and New Testament texts saw a close connection between life and movement, as can be seen, for instance, in the tradition of speaking of moving water as 'living'.[20] Movement also likely undergirds the association of life with breath.[21]

The movement that is characteristic of life is not simply movement of any form; it is self-directed movement. Even with the simplest bacterium, its internal movements, and to some extent its external movements and effects, have a responsive quality, making sense in relation to some end or ends.[22] In this way, the theologian may wish to say that in all life – even at its most basic – a spark of freedom is to be found, a flicker of what a philosopher working from the perspective of phenomenology might call 'intentionality'. To be alive is to be oriented towards the world, and to have an interest in one's environment; it is to respond to that environment with something at least analogous to desire. Moreover, this is not a mere responsiveness to one's environment, taken simply as a given. To at least some degree, all living organisms respond to their environments with

[20] For instance, Num. 19.17; Jer. 2.13, 17.13; Zech. 14.8; John 4.14.

[21] For instance, Gen. 2.7, 6.17; 1 Kings 17.17; Psalm 104.29; Job 27.3; Acts 17.25.

[22] I have discussed this in 'All Creatures That on Earth Do Make a Dwelling: Ecological Niche Construction and the Ubiquity of Creaturely Making', *Philosophy, Theology and the Sciences* 7, no. 2 (2020): 181–204.

purposeful attempts to adapt them, a point which I will discuss in terms of 'niche construction' in the next chapter.

The theologian, then, has much to say about life as such. Speaking from my own Thomist tradition, I have stressed the value of thinking about life hylomorphically, and in terms of self-preservation and self-movement (within which I have included intentionality, and life as a will-to-life). These angles are closely linked. On the one hand we have the ability to resist being moved, or changed, by another. On the other, we have self-movement and an ability to effect change. In one sense, self-movement and responsiveness seem to come first, in that self-movement allows for the pursuit of self-preservation. In another, self-preservation seems to be more fundamental, as a good or end: self-movement and responsiveness are exercised for the sake of self-preservation.

Life and Analogy

The subject of astrobiology is life, yet an unambiguous definition of life eludes us, largely on the basis that we have only one set of examples to consider. However convinced one might be by ideas of convergence in evolution (see Chapter 9), any life elsewhere in the universe is likely to be diverse, not least since life on Earth is also varied. Faced with such a plurality of things to speak about, theology has something conceptually useful to offer with an account of analogy, already well illustrated by its sense that a wide variety of things may be described as living. Alongside plants and animals, with human beings among them, theologians consider angels to be alive, although in a mode quite different from physical creatures, and they maintain that God is most alive, albeit unthinkably differently.[23]

[23] 'The word "life" is also applied to the Creator himself, and his life is life in the highest degree' (Augustine, *On Free Choice of the Will*, trans. Thomas Williams (Indianapolis, IN: Hackett, 1993), II.17, 63).

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The theologian, and especially the scholastic theologian, might readily turn to the category of *analogy* as offering a fruitful way to think about how things can be alike but not identical or, indeed, be much different, yet still show flickers of a comparability worth speaking about.[24]

Indeed, life presents us with particularly fascinating cases for analogical thinking, stretching beyond biological beings. We speak analogically by talking about a living ecosystem, or a living cosmos. Indeed, we can go further still, and ask what sort of relationship applies between our terminology when we speak also about a lively debate, the vitality of a poem, living water, or the common life of a nation.[25]

Analogy deals with how we might use the same word in different circumstance. In doing so, it sits between two outlying positions. One of those extremes is equivocity, when we use the 'same' word in more than one situation, but only accidentally, as when we might talk about the 'bark' of a tree and the 'bark' of a dog. The other extreme is univocity, when we use a word in different contexts and mean exactly the same thing by it, as when we describe both a lion and a panther as a 'cat'. In contrast to univocity, analogy recognises difference; in contrast to equivocity, it recognises kinship.

On the relation of all life to God, the source of life, we might turn to Pseudo-Dionysius, as one of the relatively few 'household name' theologians to have written explicitly about life, and with a strong sense of analogy, in book six of *On the Divine Names*.[26] The variety found within created life, he writes, reflects a gradation of reception from God, who is the source of life: 'From this Life [God's life] … every living being and plant, down to the last echo of life,

[24] For a more extensive discussion of analogy than space allows here, see my *Participation in God: A Study in Christian Doctrine and Metaphysics* (Cambridge: Cambridge University Press, 2019), ch. 7, and 'Machine Learning and Theological Traditions of Analogy', *Modern Theology* 37, no. 2 (April 2021): 254–74.

[25] See my 'Living Worlds in Christian Theology', in *Life as a Planetary Phenomenon*, ed. William Storrar and Joshua Mauldin (forthcoming, 2023).

[26] Pseudo-Dionysius, *On the Divine Names*, VI.1, translation from *The Complete Works*, trans. Colm Luibheid and Paul Rorem (Mahwah, NJ: Paulist Press, 1987), 103.

has life'. Everything he lists lives, but its life ranges from the fullness of the angels, down to 'the last echo of life'. In the drier language of Bernard Wuellner, those degrees within life would be 'analogical levels of immanent perfection in the ranks of living things, namely plants, animals, men, angels, and God'.[27]

Analogy combines a note of similarity with one of difference. However great the difference one might wish to stress between divine and creaturely life, the Abrahamic traditions have still wanted to say both that creatures are alive and that God is alive and, outside of a few examples, they intend more than equivocation.[28] God is described as the 'living God' across a notably wide range of Biblical books.[29] God is also called the source, or giver, of life. In the Book of Acts, for instance, Christ is described as 'the Author of life', and God as the one who 'gives to all mortals life and breath and all things', such that 'In him we live and move and have our being'.[30]

God, truly and absolutely, is alive; creatures are alive by imitation, receiving life, as everything else, from God, yet both God and creatures are properly said to live. The relation between those uses is analogical, which can name likeness against the backdrop of a still greater unlikeness. No organism could monopolise what it means to live. Indeed, if God is the primary analogate for life – the one in whom the meaning of 'life' finds its fullest, indeed perfect, expression – that opens the way for us to speak all the more readily about living planets, or about the cosmos as living or animated, or for that

[27] Bernard Wuellner, *A Dictionary of Scholastic Philosophy*, 2nd ed. (Milwaukee, WI: Bruce Publishing Company, 1966), 'Degrees of Life', under 'Life', 171, emphasis added. I would have a concern here about placing God alongside creatures on any graded scale, even at the top.

[28] Maimonides, for instance, treats language about God equivocally, and divine life in particular, in *Guide of the Perplexed*, I.57–58. See my *Participation in God*, 177–78, 195.

[29] Examples include Deut. 5.26; Josh. 3.10; 1 Sam. 17.26; 2 Kings 19.4; Ps. 84.2; Jer. 10.10; Dan. 6.20; Hos. 1.10; Matt. 16.16; Rom. 9.26; 2 Cor. 3.3; 1 Thess. 1.9; 1 Tim. 3.15; Heb. 12.22; with variants such as Isa. 57.15; Dan. 4.34; Rev. 4.10.

[30] Acts 3.15; Cf. Acts 17.25, 28 and Gen. 2.7; Ps. 104.30; Job 33.4; John 1.4.

matter about living water and music as full of vitality.[31] All of that would also be a witness, in yet more disparate ways, to the Living God as the giver of life. We might even say that the vitality of life is seen not only in the paradigmatic cases of life itself (in biology), but also in the analogically related breadth of how it is realised. Indeed, so fundamental has been the belief that God abounds in life, and that the cosmos is marked by that characteristic of God as its exemplar, that theological discussions have often assumed that the universe contains much life, even that wherever there is habitability, there is habitation. It is to that conjunction that we turn, having in this chapter demonstrated that our theological traditions have a good deal to say about the nature of life, as well as resources for setting out how something – here, life – might be recognised and named analogically as similar but across cases also marked by difference.

[31] Aquinas discusses the idea of water as 'living' in *ST* I.18.1 *ad* 3.

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