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God and Philosophy of Time

Emily Qureshi-Hurst

What Christians call 'creation' is fundamentally, inescapably, and entirely temporal. Humans, too, are temporal beings. As such, understanding the nature of time has been a philosophical pursuit since the pre-Socratic philosophers. Theologians have not been exempted from this interest, and thus, unsurprisingly, reflection on God's relation to time similarly spans back many hundreds of years. In fact, one might argue that the topic 'God and Time' underlies almost all key theological debates, for two reasons. First, because the nature of God's relation to time concerns the relationship between creator and creation, a core component of the bedrock of theology. Second, because understanding whether God is temporal or atemporal enables insight into what the mind of God might be like. Determining God's temporal status can inform us about issues ranging from incarnation to omniscience, from divine action to omnipotence. Thus, understanding the topic 'God and time' is integral for many (arguably most) important theological pursuits.

This article sets out the main points of interest in this intellectual terrain. Each half of the conjunction 'God and time' will be defined, and then the various ways of framing the relationship will be explored. The article will begin by setting out the kind of 'God' upon which God and time discourse is focused. Then, it will turn to 'time' by briefly introducing temporal metaphysics, with a focus on debates between the A-theory, B-theory, and C-theory of time. This terminology serves as the conceptual architecture within which much contemporary God and time discourse takes place. Following this, the ways that contemporary physics shapes our understanding of temporal reality will be set out. Then, the article will sketch the key arguments for divine atemporality and divine temporality in turn, examining how each of these models of God's relationship to time impacts our understanding of both the divine nature and the ways God might relate to the world and its inhabitants. The article will close with a few reflections on the implications of the preceding discussion for our understanding of human nature. In so doing, the article provides an up-to-date survey of this highly important topic.

Keywords: God, Philosophy, Time, Christian theology, Metaphysics, Scripture, Temporality

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5.2.2 Eschatology

1 God

‘God and time’ is a topic tackled by both philosophy and theology. Both have a rich history of reflection on divine eternity, God’s relationship with temporal creation, and how God might experience (or not experience) temporal passage. Yet these disciplines and their conclusions do not perfectly overlap. Observers of these two disciplinary fields sometimes draw a distinction between the so-called ‘God of the philosophers’ and the God described by the scripture and tradition of particular religions, a being we might call the ‘God of the theologians’. The former tends to be formulated as a highly abstract bearer of maximally perfect properties, the latter, at least in the Abrahamic monotheisms, as the bearer of these properties in addition to an historical relationship with a specific group of people and, perhaps, also a divine personal history. If and when there is a conflict between some philosophically formulated divine attribute (e.g. divine immutability) and a scriptural depiction of the Christian God (e.g. that God came to Earth, took on human form, and died) each discipline may prioritize one description over another. Which characteristic of the divine is taken as superseding the other will matter when trying to untangle the nature of the God-time relationship. Though these two need not be in opposition – and indeed it is the hope of many Christian philosophers of religion that they are *not* in opposition to theological tradition – a philosophical description of the divine nature may deviate from a theological description in various ways that are relevant to the present discussion. Thus, it is worth setting out each of these in turn at the outset of this article.

1.1 The God of the philosophers

When philosophers of religion talk about God, they often distinguish between essential and accidental properties. An object’s essential properties are the properties it cannot lose without ceasing to be itself, whereas accidental properties are properties an object bears that could be lost without such a loss of identity. We might frame such properties as necessary and contingent respectively. When it comes to God, this article will be most concerned with God’s essential properties (and perhaps not even all of those). Those that will be considered are: omniscience, being all-knowing; omnipotence, being all-powerful and perfectly free; omnibenevolence, being perfectly good and all-loving; sovereignty, being ruler of all things; simple, not comprised of component parts and without unrealized potential or immanent universals; transcendent, existing over and above physical creation; immanence, being intimately related to, and present within, creation; and, finally, a person in the broadest sense of the word, a being with intellect and a will. Much of this can be captured by ‘perfect being theology’, i.e. the position that if God were to exist he would be the most perfect being possible. According to perfect being theology, all the positive attributes a person can possess are possessed by God maximally, making God the greatest being metaphysically possible. (For a deeper dive into these divine attributes, as well as the ways in which they relate to the God and time debate, see Mawson 2019.)

However, it is worth noting here that although Mawson frames personhood as a perfection – and is by no means alone in doing so – this is not a consensus in philosophical theology as a whole. (For a more general articulation and then defence of God thus conceived, see Swinburne 2004.)

The primary accidental property that will feature in this article is that of being creator of the universe. The majority view in Christian theology is that God had a choice about whether to create the universe, and if so, which kind of universe to create. Therefore, the property of 'creator' is both accidental and contingent. Nonetheless, for theists at least, it may be the most important property of them all. Many contemporary theists believe that, out of love and the desire for a relationship with other beings, God created the universe and its inhabitants. Another motivation that has been suggested throughout Christian history is God's own glory or goodness – an appealing possibility to those who want to deny that God's reason to create can lie outside of the divine nature itself. Whatever the motivation, theists agree that God created the universe and freely chose which properties it should have. The finer details about the divine nature tend to be filled in by the particularities of each religion's scripture and tradition. This article will focus on Christianity.

1.2 The God of the theologians

1.2.1 Scripture

Scriptural depictions of God's relationship to time are complex and cannot easily be sorted into a single clear model. Generally, however, God is depicted as being intimately involved in the unfolding of creation, interacting within history in a way that seems to show that he is a temporal being. Exactly what this means will be explored later, but a working definition of a temporal being is a being who has some or all of the following: temporal properties, temporal extension, temporal location, and an experience of temporal passage. In other words: a being who exists in, and experiences, time. Psalm 102:23–28, for example, says of God:

> Long ago you laid the foundation of the earth, and the heavens are the work of your hands. They will perish, but you endure; they will all wear out like a garment. You change them like clothing, and they pass away; but you are the same, and your years have no end.

This passage describes God as creating the cosmos 'long ago', with each creative act involving change enacted by a changeless God. The temporality of God is difficult to unpack here – an immutable God is contrasted with a changing cosmos, but God does seem to be actively involved in the temporal cosmos as it changes (i.e. the phrase '*you change them* like clothing'). To gain a fuller picture, one must look to other scriptural passages.

The successive nature of creative acts is never clearer than in the Genesis narratives. In Genesis 1 God creates the universe in stages, with creation coming into being over the course of six creatively active epochs. First, God 'separated the light from the darkness […] and there was evening and there was morning, the first day' (Gen 1:4–5). In this passage God creates worldly time, and this time continues to structure the creation narratives and the divine action within them. Similarly, in Genesis 3, God converses with and walks alongside Adam and Eve, interacting with them in a temporal mode. Throughout the Hebrew Bible, God is shown to be active in the unfolding of human history. He commands (Exod 3–4), he punishes (Gen 7), he rewards (Job 42:10–17), and he enters into a covenant with his people (Gen 6:18; Isa 54:9; Num 25:10–13). In other words, he responds to events as they happen, engaging in a dynamic relationship with the world. Similarly, the New Testament tells of God taking on flesh, becoming human, and seeming to live as a temporal being (John 1:14). If God is triune, as Christianity claims, then according to the doctrine of *homoousios* the temporal status of one trinitarian person must be shared by the others. Each divine person must have the same divine nature. All of this seems to indicate that the God of the theologians is temporal.

Despite this, according to the aforementioned Psalm, God's temporality is unlike that of humans; he is expected to outlive creation and remain unchanged throughout, possessing 'years' everlasting. Similarly, Ps 90:2 claims that God exists 'from everlasting to everlasting'. The majority of Christian tradition has understood God as eternal, meaning God exists without beginning or end, and is not within the temporal dimension that frames creaturely existence. In order to see why, this article will now turn to some key voices in the Christian tradition. Whilst it is impossible to cover all the voices that comprise this corpus, it will survey some of the most notable figures. The contemporary literature will be discussed in section 3 and section 4.

1.2.2 Tradition

The Platonic idea of divine immutability had a significant impact on the development of theological reflection on God and time. Divine immutability, namely the idea that God cannot change, combines elements of Plato's ontology of the Forms – which are perfect, immaterial, and unchanging – with perfect being theology. Plato argued in Republic (*Republic* 381b–c) that a perfect being cannot change because they are unable to improve, being already perfect, and they cannot deteriorate as this would mean they cease to be perfect. Following the Aristotelian commitment to unity of time and change, a being who cannot change was believed to be outside of time by necessity. Divine immutability reverberated throughout Christian tradition, its legacy lasting for centuries. It is arguably a leading reason why divine atemporality played such a significant role in Christianity's intellectual history.

The first theological voice to consider is St Augustine of Hippo (354–430), who reflected on time in the autobiographical *Confessions*. Augustine famously wrote that time is elusive and hard to define: ‘what, then, is time? If no one asks me, I know: if I wish to explain it to one that asks, I know not’ (*Confessions* XI; Augustine of Hippo 1999: Book XI). He makes a distinction, one that has been reached for many times since, between divine eternity and created temporality. The former is the (a)temporal mode that characterizes God’s eternal life, whilst the latter is imperfect and limited by the experiential context of creatureliness. Augustine seems to have believed that the creaturely experiential context leads us to encounter time as though it is dynamic and tensed, in that it flows and is fragmented into past, present, and future. For the perfect and immutable God, however, there is no distinction between tenses or times; instead, all moments are held together in eternity. Divine time is eternal (tenseless, unified) and stands over and above, and is ontologically superior to, created time. Whilst our senses ‘flutter between the motions of things past and things still to come’, God dwells in ‘the glory of everfixed eternity’ – these states are radically different in kind (*Confessions* XI; Augustine of Hippo 1999: Book XI).

Another notable writer whose contribution to this debate has been significant and enduring is Anicius Manlius Severinus Boethius (c. 475–c. 526). Boethius defined eternity in the following way:

> Eternity, then, is the *complete possession all at once of illimitable life*. This becomes clearer by comparison with temporal things. For whatever lives in time proceeds as something present from the past into the future, and there is nothing placed in time that can embrace the whole extent of its life equally [...] it does not yet grasp tomorrow but yesterday it has already lost; and even in the life of today you live no more fully than in a mobile, transitory moment. [...] Therefore, whatever includes and possesses the whole fullness of illimitable life at once and is such that nothing future is absent from it and nothing past has flowed away, this is rightly judged to be eternal, and of this it is necessary both that being in full possession of itself it be always present to itself and that it have the infinity of mobile time present [to it]. (Title V.6; Boethius 1969, emphasis added)

From this definition, Eleonore Stump draws out four components: (1) anything eternal has a life, (2) the life of an eternal being cannot be limited by beginning or end, (3) eternity involves infinite duration, and (4) an eternal being possesses all its life at once, meaning it cannot be temporal (Stump 2003: 133–134).

Anselm of Canterbury (1033–1109) also reflected on the relation between divine eternity and creaturely temporality. In conjunction with much of the theological corpus, Anselm was committed to the doctrine of divine simplicity. According to this doctrine, God is a perfect metaphysical unity, his essence is equal to his attributes, and he is not comprised of parts (temporal or otherwise). Such a view has led many, Anselm included, to reject the idea that God’s experience could be split up into temporal parts, namely ‘what is’, ‘what has been’, and ‘what will be’. Rather, an omniscient, perfectly simple God would experience

all of creation at once in a timeless unity. From divine simplicity follows atemporality. In his *Proslogion*, Anselm presented his famous definition of God as a being than which no greater can be conceived (which has since been developed into the ontological argument for God's existence). If God is a perfect being, then he cannot change, because any change would necessarily be a form of degeneration. Thus, on the basis of these doctrines, Anselm concluded that God must be timelessly eternal.

St Thomas Aquinas (1225–1274), the medieval thinker whose writings have left the most significant impact on the development of Christian theology, can be read as having two distinct points of focus when it comes to the topic of God and time. First is his discussion of divine eternity, and second is his treatment of the relation between God and temporal creation. He argued that God has no beginning or end, and God does not experience succession, passage, or change. Along with most other medieval philosophers, Aquinas endorses both Boethius' definition of eternity and the classical theological doctrines of divine simplicity and immutability, leading him to the same conclusions as Anselm. Echoing Boethius, Aquinas holds that all times are atemporally known by God at once. Aquinas illustrates this through the metaphor of standing at the summit of a mountain with an entire landscape before you:

> God, however, is wholly outside the order of time, stationed as it were at the summit of eternity, which is wholly simultaneous, and to Him the whole course of time is subjected in one simple intuition. For this reason, He sees in one glance everything that is affected in the evolution of time, and each thing as it is in itself, and it is not future to Him in relation to His view as it is in the order of its causes alone (although He also sees the very order of the causes). (*Commentary on Interpretation* I.14.20)

One ought not to take the metaphor too literally, however. God does not perceive events in time like some eternal and external onlooker. For Aquinas, God atemporally knows all the facts about history by knowing their cause (i.e. himself). Since God predetermined all things, he knows all things before they exist. So God does not need to be within time to have knowledge of what happens within the temporal, created, sphere.

As this snapshot shows, for a significant portion of Christian history God was understood as existing *outside* time. Divine eternity was thus interpreted as atemporal – existing always but not in a way structured by passage, duration, or temporal location. The alternative view understands divine eternity to mean everlasting existence – God exists for all time, experiences the passage of time as it unfolds, and has a mental life that is temporally structured. It is this view that has risen to prominence in recent years, led by scholars like William Lane Craig, Richard Swinburne, Nicholas Wolterstorff, and Ryan Mullins. This view will be discussed in section 3.

2 Time

2.1 The metaphysics of time

Since 1908, the philosophy of time has been shaped by a seminal article published by J. M. E McTaggart entitled 'On the Unreality of Time'. In this article, McTaggart outlines three different ways of describing positions in time: first, by their possession of the tensed properties *past, present*, and *future*. Second, via the two-place relations *earlier than*, *later than*, and *simultaneous with*. Third, in accordance with the three-place relation of temporal betweenness. He used these to form three temporal series, each of which holds one of the above to provide the fundamental (i.e. most basic or essential) description of time's ontology.

The temporal series in which tensed properties are fundamental to any complete description of time is called the A-series. The A-series makes two central claims: (1) time passes, and (2) tense is an irreducible feature of reality. Essentially, you cannot capture everything essential to time without including which events are past, which are present, and which are future; and, in order to substantiate this distinction between tenses, time must objectively pass.

McTaggart named the next temporal series, in which two-place temporal ordering relations are fundamental, the B-series. On the B-series, it is possible to give a complete description of temporal reality simply by describing how events are ordered in time. In other words, if you correctly describe which events are earlier than, later than, or simultaneous with other events, then you have provided a complete explanation of time. Tense and passage are surplus to requirements. The third description, the C-series, denies both that time passes and that time is inherently directional. Instead, the C-series holds that the three-part relation of temporal betweenness is all that is required to account for time's fundamental nature. In this sense, moments in time resemble colours in the light spectrum. When listing the colours in the light spectrum, the long wavelength end and the short wavelength end are equally valid starting points. According to the C-series, moments in time can also be understood as appropriately ordered at whichever end of the temporal series one begins. All you need is to say which events come between which other events.

The distinction between the A-series, B-series, and C-series sits at the heart of contemporary debates in the philosophy of time. These series have each been reified (along with various metaphysical and linguistic claims) into fully-fledged metaphysical theories known as the A-theory, B-theory, and C-theory.

Though there are several A-theories, all are committed to the following three claims:

(1) Time is *dynamic* in that it passes or flows.
(2) Events possess objective tensed properties.
(3) There is an objective and universal present moment we call *now*.

There are three well-known A-theories – each formed by a different combination of ontological claims – and several lesser-known ones which are outside the scope of the present discussion. The most popular amongst theists, Presentism, claims that only the present moment exists. For this reason, it is the most metaphysically sparse view, meaning it is committed to the existence of the fewest moments at any given time. According to Presentism, an objective, universal, present moment gives rise to the future as the past falls away into non-existence, and thus acts as a frontier of becoming. The Growing Block theory, on the other hand, holds that the past possesses some level of concrete existence. This ontological 'block' of past and present moments grows continuously as ever more present moments come into existence to join the others. Like Presentism, the Growing Block view denies the existence of the future. The third, the Moving Spotlight view, claims that all temporal points (i.e. the past, present, and future) exist, but that some times are metaphysically privileged. Much like the way a spotlight moving across a dark street would illuminate each house in turn, so too does flowing time pick out 'nows' which are then objectively present, and this constitutes the passage of time. These are the three A-theories, one of which is committed to the existence only of the present, one which is committed to the existence of the present and the past, and one which is committed to the existence of the past, present, and future.

There is less variation in the B-theory, which claims that all moments in time exist in a four-dimensional 'block', which has led to the term 'Block Universe' often being used synonymously with the B-theory (although this is not strictly speaking true, as the Moving Spotlight is also a Block Universe view). Another word for the B-theory is eternalism. The B-theory makes the following three claims:

(1) Time is *static* in that it does not pass or flow.
(2) Events do not possess objective tensed properties (instead, time is fundamentally tenseless).
(3) All moments of time always exist.

The C-theory is also committed to the existence of a block universe. It denies, however, that there is any objective or fundamental temporal ordering within the block. Rather, it makes just as much sense to 'read' the story of the universe as beginning at the Big Bang (as we always do) as it does to begin describing the universe with the Big Crunch or heat death and closing with the Big Bang. As long as the events aren't in the incorrect places relative to each other (e.g. if the death of Queen Elizabeth II were to be erroneously placed between the First and Second World Wars), then you have captured everything essential about the nature of time. Although the philosophy of time contains far more than can be covered here, the above is all that is required (metaphysically, at least) for the God and time debate to proceed.

2.2 The physics of time

One of the most valuable tools for understanding the nature and structure of temporal reality is physics, i.e. the empirical study of the material universe and how its component parts interact. Time can be empirically investigated from several angles – from thermodynamics to quantum mechanics – and this article is only able to provide the briefest of snapshots. Nonetheless, a glance towards the empirical sciences reveals that understanding the nature of time may be more challenging than the previous metaphysical discourse indicated.

2.2.1 Special relativity

The Special Theory of Relativity, introduced by Albert Einstein in 1905, catalysed a revolution in our understanding of space and time (Einstein 1905; 2010, originally published 1920). Newtonian Mechanics, the scientific paradigm that previously dominated this intellectual space, held time to be absolute and wholly independent of objects or observers. In *Philosophiae Naturalis Principia Mathematica*, Newton argued that 'absolute, true, and mathematical time, of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration' (Newton 1934: 6–12, Scholium to Definition viii). Thus Newton was committed to the objective passage of time and the existence of an absolute present moment that structures that passage.

Special Relativity profoundly violated these postulates, sending shockwaves reverberating throughout the scientific community. Rather than space and time being absolute, Special Relativity (following Minkowski's geometric formulation) indicated that each are distinct dimensions of four-dimensional Minkowski space-time, and one's measurement of length and duration is, to some extent, observer dependent. In a paper published in 1908, Minkowski made his now famous proclamation that, as a result of Special Relativity, 'space by itself, and time by itself, are doomed to fade away into mere shadows, and only a kind of union between the two will preserve an independent reality' (Minkowski 1908). What this means in practice is that observers travelling at different speeds will disagree on the duration and distance between the same two events. This has been empirically confirmed many times over since Einstein introduced it in 1905 (Brown 2005: 82–87). Importantly, within Special Relativity there are no privileged observers, meaning no single observational perspective can take precedence over any other. What this leads to is the so-called *relativity of simultaneity*, namely the claim that objective simultaneity relations cannot be substantiated within the special theory. Because there will be variation in distance and duration between different frames of reference, and there is no observer-independent way to choose between these, the notion of an absolute simultaneity relation becomes untenable. That appears to lead to the conclusion that the special theory is incompatible with the existence of a universal present moment.

There is some dispute over both the correct interpretation of Special Relativity and its domain of application, however, and several interpretations of the content of the theory are available. The most widely accepted, at least within physics, is generally referred to as the space-time interpretation (or the Einstein-Minkowski interpretation). The space-time interpretation holds that Special Relativity ought to be taken at face value, and that we ought not to postulate the existence of further structures or processes than those contained within the bare bones of the theory. As such, the space-time interpretation is founded upon operationalist principles, a point of contention amongst critics.

The Operationalist defines scientific concepts in terms of the operations used to measure them, i.e. time is equivalent to whatever is measured by clocks (Einstein 2010: 22). In the context of Special Relativity, the Operationalist would state that if we are unable to measure absolute simultaneity then no such relation exists. As such, the space-time interpretation is committed to the following three claims:

(1) Space and time are distinct dimensions of the more fundamental entity *space-time*.
(2) One's measurement of duration and length is determined by one's frame of reference.
(3) The reason absolute simultaneity relations cannot be reconciled with Special Relativity is because they do not exist.

This must then be applied to the categories introduced in section 2. For an A-theory to be the correct description of time, there must be an objective, changing, universal now at which point potential future events come into being when they become present. Such a present moment must be sharp, clearly defined, and unambiguously separate the (unreal) future from the past. Although the Moving Spotlight view is committed to the existence of the future, it is the A-theory with the most structural problems and thus has the fewest proponents. A profound problem for both Presentism and the Growing Block is raised by Special Relativity's denial of absolute simultaneity relations (and thus, an absolute present moment). The relativity of simultaneity is problematic for the existence of a universal now because, according to Special Relativity, some events (specifically, spacelike separated events) are future in one reference frame and present in another. This generates the contradictory conclusion that future events both exist and do not exist.

The first proponent of such an argument was the philosopher Hilary Putnam (1967: 242). Putnam pointed out that Presentism denies that the future exists, but Special Relativity shows that certain events in my future (i.e. events the Presentist says are *unreal*) are in your present (i.e. events the Presentists says are *real*). Thus, Presentism plus Special Relativity leads to the contradictory conclusion that some events both exist and do not exist. As contradictions cannot be part of reality, the space-time interpretation is incompatible with any A-theory of time that is committed to the unreality of the future. The

Moving Spotlight is also ruled out due to its commitment to a universal present moment, i.e. an objective ‘now’, which is incompatible with the relativity of simultaneity. The space-time interpretation instead supports a four-dimensional space-time ontology which unites the three dimensions of space with the one dimension of time, namely a B-theory or C-theory.

A prominent alternative (though still a minority view in physics and metaphysics) is the neo-Lorentzian interpretation devised and defended by William Lane Craig. Craig is a presentist who has, for partly philosophical but primarily theological reasons, spent much of his career defending the A-theory of time against Special Relativity, the philosophy of temporal language, and McTaggart’s argument against the A-theory. His argument runs as follows:

(1) God exists.
(2) The A-theory of time is correct.
(3) If an A-theory of time is correct, there are tensed facts and temporal becoming.
(4) If God exists and there are tensed facts and temporal becoming, then God knows tensed facts and is the cause of things’ coming to be.
(5) If God knows tensed facts and is the cause of things’ coming to be, then God is temporal.
(6) There are tensed facts and temporal becoming (2, 3).
(7) God exists and there are temporal facts and temporal becoming (1, 6).
(8) God knows tensed facts and is the cause of things’ coming to be (4, 7).
(9) God is temporal.
(10) If God is temporal, then a privileged reference frame exists.
(11) If a privileged reference frame exists, then a Lorentzian interpretation of SR is correct.
(12) A privileged frame exists (9, 10).
(13) A Lorentzian interpretation of SR is correct (11, 12) (Craig 2001: 165).

One can identify three primary claims that underly this argument. First, Craig is committed to the existence of some form of background structure which functions as a preferred frame of reference. Against this preferred frame of reference, the objective passage of time can be measured, and absolute simultaneity relations can be recovered within physics. Craig suggests a range of possibilities (2001: 165). Second, he invokes the distinction between metaphysical, divine time on the one hand, and relative, physical time on the other, reminiscent of a similar distinction made by Newton. In contrast to the space-time interpretation, Craig interprets time dilation and length contraction as consequences of relative, measured time and space and not absolute metaphysical time.

Rejecting Operationalism, Craig argues that our inability to empirically measure absolute time is no more than a consequence of our methodological limitations. An omniscient

God would know which events are happening *now* according to the standard set by absolute metaphysical time, even if we creatures are unable to access this information. Craig therefore takes Special Relativity as describing physical processes only, leaving the metaphysical time (grounded in divine time) untouched. For this reason, he is still able to endorse Presentism. The third and final claim is theism. Craig argues that, for theological reasons which shall be discussed in section 4, God must be temporal, and a temporal God only makes sense in an A-theoretic universe. His position is often referred to as a 3+1 space-time ontology, as it is committed to a clear distinction between three-dimensional space and one-dimensional time. Which of these is preferable will depend on one's prior commitments, one's theological position, and the extent to which one believes theology ought to weigh in on matters of scientific interpretation. For a comprehensive assessment of the scientific viability of neo-Lorentzian relativity, see a review article by Yuri Balashov and Michel Janssen (2003). For another argument that presentism is compatible with Special Relativity, see Zimmerman 2011. A third option, the so-called *inhomogeneous flowing time* interpretation of Special Relativity, is offered by Robert John Russell (2012; 2022).

2.2.2 General relativity

Special Relativity is not the final word on matters spatial and temporal, however. In 1915 Einstein published his General Theory of Relativity. The general theory is less straightforward in its support of one temporal ontology over another. In contrast to the Newtonian understanding of gravity as a force acting between massive bodies, General Relativity reconceptualized gravity as the warping of four-dimensional space-time by massive bodies. A common metaphor for understanding what this means is that of a sheet held taut at each corner with a bowling ball at the centre. The mass of the bowling ball will stretch the sheet around the curvature of its surface, and the heavier the ball the greater this warping will be. If a smaller ball, say, a tennis ball, were rolled past it, its trajectory would be affected by the curvature of the sheet. The tennis ball may even begin spinning around the bowling ball in a facsimile of orbital motion. The effect on the two-dimensional surface of the sheet is not unlike the way celestial bodies like stars and planets warp the four-dimensional space-time in which they dwell.

The warping of space-time affects more than the motion of celestial bodies, it also affects observer's measurements of temporal duration. This is because light always takes the shortest path between two points. In flat space-time, this is a straight line. If space-time is curved, however, then light will be travelling a greater distance along the curvature of space-time than it will where space-time is flatter. A 'straight line' in curved space-time is known as a geodesic. In General Relativity, light follows space-time geodesics, and the greater the curvature of space-time the greater the distance light must travel. Regardless of one's observational perspective, one must always measure the speed of

light as c, whether one is in a region where space-time is curved or flatter. Because speed = distance ÷ time, the fixity of the speed of light means that observers will disagree on distance or duration if they are in different locations relative to a given massive body. In other words, an astronaut could be on a massive planet for an hour in their time, but on returning to their spaceship much further out in the gravitational field they could find that their colleagues who remained on the ship had measured ten years between the astronaut leaving and returning.

Despite these divergences in duration between observational perspectives, some A-theorists have argued that their case is strengthened when moving on from Special Relativity to General Relativity. Both Richard Swinburne and William Lane Craig have argued that certain solutions of Einstein's field equations, each of which corresponds to a possible world, can substantiate what they have called 'cosmic time'. These solutions are known as the Friedman-Lemaître-Robertson-Walker (henceforth FLRW) cosmological solutions, and each of them maps the structure of a possible universe. FLRW universes possess the following properties: (1) homogeneity (the universe is the same at every point), (2) isotropy (there is no preferred direction in the universe), (3) expansion (the overall size of the universe evolves dynamically). Because of these symmetries, one can foliate space-time in such a way that globally extended instants, i.e. universal *nows*, emerge. Cosmic time acts as a universal measure of how much time has elapsed since the beginning of the universe, and thus, according to its proponents, can once again recover the notion of an absolute present moment within physics. This is because cosmic time gives an observer-independent and objective way of measuring the passage of time (Swinburne 2008: 224).

It is possible to critique this approach from a number of different angles, each of which is explored in greater detail by Read and Qureshi-Hurst (2021). One possible route is to argue that focusing on cosmological solutions of General Relativity changes the theory under consideration, abandoning the appropriate object of focus. Another option is to argue that FLRW solutions depict universes with perfect homogeneity, isotropy, and expansion, meaning that they are not descriptions of the actual world which does not exhibit these perfect symmetries. We should, according to this critique, only care about whether the A-theory is compatible with our actual world, not some abstract idealization. A third response is to argue that using cosmic simultaneity as a vehicle for grounding an objective past/present/future distinction is inappropriately motivated. A primary motivation for endorsing an A-theory is to recover our experience of temporal passage. Yet our experience is shaped by local time, not cosmic time. In fact, the latter is radically disconnected from our experience, so it cannot establish the kind of temporal passage the A-theorist requires. Finally, one might follow Gödel in presenting a modal argument to the effect that whether a universe manifests primitive tensed properties cannot be a contingent affair. Since (for technical reasons) it would have to be a contingent

affair in General Relativity, there can exist no such objective tensed properties. Despite these criticisms, the A-theory invariably fares better in General Relativity than in Special Relativity. Whether it does enough to save the A-theory remains an open question.

2.2.3 Quantum mechanics

The two most successful physical theories are, at present, incompatible. General Relativity, a theory concerning gravity, describes the large-scale behaviour of cosmic objects and their interaction with curved space-time. Quantum mechanics, on the other hand, is concerned with the smallest scale of physical reality: subatomic particles. Whilst General Relativity describes space-time as continuous, namely infinitely divisible, quantum mechanics introduces granularity into myriad properties at the subatomic level, such as energy and length. These properties can only have certain values, functions of Plank's constant, meaning that there is a minimum value below which they cannot go. This may turn out to be the case for space-time (and thus for the temporal dimension) if a Quantum Theory of Gravity is ever developed. At present, physicists do not agree about whether space and time are continuous or particulate.

Absolute simultaneity plays an important role in quantum mechanics despite it being incompatible with Special Relativity (and, perhaps, General Relativity as well). There are many interpretations of non-relativistic quantum mechanics, but in each an absolute space-time structure is taken for granted and Newtonian-style absolute time is used to mark the evolution of a quantum system. For example, interactions between entangled quantum particles great distances apart are faster than the speed of light, seeming to require instantaneous (thus absolutely simultaneous) spooky-action-at-a-distance of the kind forbidden by relativity.

All this goes to show that whilst physics can help illuminate the path toward answers about the nature of temporal reality, it does not hold all the answers. Whilst physicists' empirical findings cannot be ignored in both the practices of temporal metaphysics and God and time discourse, nor can they be the sole participant in the discussion. Now that both objects of study, namely 'God' and 'time', have been set out, we are able to turn to their conjunction.

3 Divine atemporality

One can be either a temporalist or an atemporalist about God. Regarding the latter: the proponent of divine atemporality defines God as a maximally perfect being who has no beginning or end and whose experience does not contain passage, succession, or duration. Whilst this is the standard contemporary articulation of divine atemporality, there are exceptions to this characterization of divine atemporality with regards to whether it should include or exclude duration. One contemporary exception is found in the work of

Stump and Kretzmann and their commitment to the existence of an infinite, atemporal present moment. This present moment is found in their defence of Eternal-Temporal (E-T) simultaneity, a relation they propose exists between eternal, atemporal, God and temporal creation (Stump and Kretzmann 1981). The eternal present (contra the temporal present) is characterized as having an infinite atemporal duration, an idea seen above in Boethius and which is also present in the thought of some other medieval scholars.

Making sense of atemporal duration is not easy without retreating into some kind of divine mystery, because duration is typically understood as an extension in time – a period in which one or many moments occur that together comprise a temporal extension. It isn't really clear what duration is, if it is not *that*. In the opinion of this author, then, atemporality and duration are incompatible, as duration is an inescapably temporal concept. Duration without extension or temporal parts is not duration at all. Alan Padgett agrees, arguing that 'atemporal duration' is an oxymoron, as duration is by definition an interval of time (1992: 67). William Lane Craig, too, notes various difficulties with claiming atemporal duration can convey anything more than metaphorical meaning (1985). Because of this, it is difficult to unpack exactly what atemporal duration might look like, at least if the concept is understood literally. As such, although atemporal duration does appear at times throughout theological history, this article will proceed by defining divine atemporality without the inclusion of duration (atemporal or otherwise).

An atemporal being is atemporal insofar as they exist outside of time (they do not have temporal extension or location) and do not enter into temporal relations with other beings. Nor do they have any temporal distinctions between experiences or moments in their life as an enduring temporal creature would. An atemporal God knows all of creation at once, as an onlooker might perceive the entirety of the ceiling of the Sistine chapel in a single glance. There are several theological arguments for the atemporal God that we will consider here. The model of time that often (though not invariably) goes hand in hand with divine atemporality is eternalism or the Block Universe. It is worth noting, therefore, that arguments for divine atemporality can also be made by arguing that eternalism is the most plausible view of time, and if eternalism is true then God must be atemporal. Such arguments are explored in greater detail by Qureshi-Hurst (2022a: section 3.1).

3.1 Sovereignty

The first theological argument for atemporalism relates to divine sovereignty. Theism holds that God is sovereign, meaning he is the ruler of all things and is not subject to any external power or force. According to proponents of atemporalism, God is able to remain both sovereign and omnipotent by not being subject to the passing of time. A temporal God, on the other hand, has been accused of being trapped within time, subservient to the

inexorability of its passing. For this reason, this argument is also known as the prisoner of time objection.

Responses to this objection are available. Swinburne, for example, argues that God has freely chosen to give up this element of his sovereignty because this affords him a more intimate relationship with creation. Because this comes about as a result of God's free decision, he is not trapped by the passage or the metric of time in the way that the prisoner of time objection suggests. Swinburne argues that God has created the laws of nature, and these bring about a temporal metric that would not have existed without those laws of nature. Then, by virtue of temporally relating to creation, God's experience is to an extent shaped by that created temporal metric. As Swinburne argues, however, God could change his mind about this tomorrow if he wanted to, meaning he remains sovereign in all the important ways. He writes:

> The doctrine [of divine temporality] does not have the consequence that God is time's prisoner, for the reason that although God and time exist together – God is a temporal being – those aspects of time which seem so threatening his sovereignty only occur through his own voluntary choice. To the extent to which he is time's prisoner, he has chosen to be so. It is God, not time, who calls the shots. (Swinburne 1993: 218)

Similarly, God has chosen to restrict his knowledge of certain future events, namely those events that involve the free choices of human beings, so as not to stymie our ability to be free in a libertarian sense. As Swinburne writes, this boundary to God's knowledge should not be seen as threatening God's omniscience:

> I do not see any reason why a theism which emphasizes God's omnipotence and perfect freedom should regard such a God as less worthy of worship if by his own free choice he exercises his omnipotence in such a way as to limit his omniscience for as long he chooses. (Swinburne 2017: 683)

This theme will be explored further in section 5.1. All that is needed for the present point is as follows Swinburne's work on God and time – particularly what he says in response to critiques that divine temporality limits some of God's great-making properties – emphasizes that God makes certain free decisions that *appear* to limit his power and knowledge, but that actually ensure God's purposes for creation are most fully realized.

Another response to the prisoner of time objection is offered by Ryan Mullins, who defends an 'identification view' which holds that time is to be identified with God, perhaps as an essential divine attribute or mode (Mullins 2020). Mullins traces the identification view back to the late fourteenth-century philosopher Nicole Oresme who endorses a timeless view of God (a version of timelessness that involves timeless duration, meaning it is necessarily without beginning, end, or succession). Although, as Mullins acknowledges,

the identification view has not received a significant amount of attention throughout Christian history, he points to several others who he believes hold something like this view. Thomas Torrance is one such theologian.

One reason to think that God is time is because, according to Mullins, the existence and nature of God becomes the ontological source of moments. God exists in the precreation moment, and the exercise of his free will gives rise to all subsequent moments. Both the existence and the order of moments are contingent upon God's decisions about how to freely exercise his power. Moreover, Mullins argues that God should be thought of as mutable, not immutable. Although God's essential attributes never change, God can undergo accidental changes including that of becoming the creator, redeemer, and Lord of humanity. Since God is a necessary being, and God undergoes such change, A-theory-type time (required for change) exists necessarily. Divine sovereignty emerges unscathed on this view because God willingly takes temporal properties like succession into his life. It is by being temporal that God perfectly realizes his ultimate purposes for creation. On this, Mullins and Swinburne align. Similar points are made by William Lane Craig, with the difference that Craig holds God to be temporal with creation and atemporal without creation (Craig 2001).

3.2 Omniscience

Another of the primary arguments against the temporal God claims not merely that he is trapped within the passage of time experientially (i.e. he can only experience *now*), but that he is also unable to know certain facts about the future as long as individuals have genuine freedom about which future actions to take. If this is true, and there *are* facts about the future that could be known but that God does not know, then God's omniscience is threatened. Similarly, according to this argument presented by Mawson and other contemporary philosophers of religion, God cannot return to the past except in his memory. If God cannot experience or interact with anything other than the present (on Presentism) or the present and the past (on the Growing Block) then most of creation is utterly inaccessible to God. The atemporal God faces no such problems. The atemporalist maintains that God is outside of time, able to apprehend all events at once, and so God atemporally knows everything that happens in creation. Thus, he has perfect knowledge of the present and past, and perfect foreknowledge of the events that, to us, seem to lie in the future. This argument and some responses will be explored in section 5.1.

3.3 Immutability

Divine immutability is affirmed by those who subscribe to classical theism, and has been a generally agreed upon attribute of God since the earliest days of the church. As seen in section 1.2.2, divine immutability is grounded upon both perfect being theology and the Platonic idea of divine immutability. If God is perfect, then God cannot undergo any change

because this would constitute a departure from perfection. Due to the intimate connection between time and change, a changeless being is also a timeless being.

Nevertheless, theists in recent years have been moved to reject divine immutability, as it forces proponents to reject both intrinsic change and extrinsic change. Intrinsic change is the type of change that occurs to myself *qua* myself, i.e. when I change from being an infant to being an adult. Extrinsic change, sometimes called relational or 'Cambridge' change, involves change in relation to something else. I undergo a Cambridge change in the property 'being taller than my brother Ben' when Ben outgrows me, even if I have stopped growing and nothing about my own height has changed. It is generally agreed that God does not undergo intrinsic change, but if God is timeless then he does not undergo extrinsic or relational change either because this would force him into holding temporal relations with other beings. If God is *not* the redeemer of the non-believing Saul at one moment and then is the redeemer of the converted Paul at another moment, then God has undergone a Cambridge change with respect to Paul (née Saul).

Similarly, an immutable God cannot respond to creation, and recent historical events have revealed how theologically valuable such responsiveness can be. In response to the horrors of the twentieth century, Jürgen Moltmann developed his doctrine of a suffering God who is co-present with sufferers and bears that suffering with them (Moltmann 1974). This position requires that God be within time in order to share in and respond dynamically to the unfolding suffering within creation. Although divine passibility did not begin with Moltmann, his work demonstrated how important the doctrine could be in a world suffering immense and unimaginable pain. Without a temporal God, divine response to suffering is impossible.

The problem is that scripture seems to require that God undergoes various types of change, whilst atemporalism denies it. If God is not incarnate one moment, and is incarnate the next, then God has undergone a temporal change. Thus there appears to be a tension between the atemporal, immutable God of the philosophers and the God of the theologians who is witnessed in scripture. It is the atemporal divine mode that best fits with the God of the philosophers.

4 Divine temporality

The proponent of divine temporality defines God as a maximally perfect being who has no beginning or end but instead possesses a life of either infinite duration or duration that lasts for all time (if time is finite not infinite), and who also experiences succession and temporal location. Such a being experiences temporal passage, succession, and duration, along with other temporal beings, but is distinguished from other temporal beings in that God's existence is not finite. The divine life never began and will never end; it is everlasting. This view is most commonly associated with Presentism, although a minority

of divine temporalists endorse other A-theories. We will consider three main arguments for this position. Arguments for divine temporality can also be made via arguing for Presentism and then saying that this temporal ontology is evidence of divine temporalism.

4.1 Omniscience

There are certain things about A-series time that one can only know if one is temporal. One set of things only a temporal being can know is the set of tensed facts, such as the fact that it is now 9:29am. Tensed facts change as time passes, so an omniscient being (who must have perfect knowledge of every fact) must experience changes in their knowledge as, for example, the time changes from 9:29am to 9:30am. As seen earlier, any change in God (relational, intrinsic, noetic, etc.) requires that God be temporal, because a being who experiences change must be able to experience the temporal relations 'before' and 'after'. Before I wrote this sentence, God knew it was 9:29am, and after I wrote it, God knew the time was 9:30am. Another way of putting this is by following Delmas Lewis in claiming that if a being is outside A-series time then they are missing fundamental features of reality, i.e. nowness and passage. Lewis calls this 'actuality-blindness' (Lewis 1984: 78). But if nowness, passage, and tensed facts are part of the world, then an omniscient being cannot be blind to them. Therefore, if there are tensed facts (i.e. if the A-theory is true) then God must be temporal to remain omniscient (see Deng 2019: 42–46 for an in-depth discussion of various versions of this argument and its connection to temporal metaphysics).

4.2 Personhood

Nicholas Wolterstorff develops a biblically informed argument in favour of the conclusion that 'God has a history, and in this history there are changes in God's actions, responses, and knowledge' (Wolterstorff 2010: 158). For this reason, amongst others, the God of the theologians does seem to be a temporal God. The Bible, according to Wolterstorff, Mullins, and other temporalists, depicts a God who is deeply embedded in the historical narratives that shape human existence (Mullins 2016). This God engages in, responds to, and changes with creation, showing God to be a personal agent. God is also depicted as having contextual knowledge of historical situations, a kind of knowledge that changes dynamically as those historical situations change. These ideas, explored in section 1.2.1, only make sense if God is depicted as a personal, temporal agent, and if an A-theory of time, which holds to the reality of newness, becoming, and change, is correct. This also has implications for divine action.

4.3 Divine action

A core tenet of Christian theism is the claim that God is immanent, meaning he is present in the world and is thus able to act in response to it. This is clear in scripture. Matthew 7:8

says, ‘for everyone who asks receives, and he who seeks finds, and to him who knocks it will be opened’; Jer 29:12 says, ‘then you will call upon Me and come and pray to Me, and I will listen to you’; and John 14:3 says, ‘whatever you ask in My name, that will I do, so that the Father may be glorified in the Son’. God is portrayed as a being who is willing and able to interact with the world in the form of answering prayers. Not only is this scripturally important, it is also a significant feature of the lives of many religious people. If God does not – indeed cannot – respond to prayers, then is it worth cultivating a relationship with such a God? Moreover, the Bible shows God carrying out myriad miracles, including the parting of the Red Sea. Divine temporalists argue that God could not act in the world to bring about a specific outcome, as is the case in petitionary prayer and miracles, without being temporal. If a being performs a temporal act, then they themselves are temporal. The most significant form of divine action is, of course, the incarnation, an act that involves God entering the temporal world. Such an act, temporalists claim, cannot be performed by an atemporal God. As such, the temporal God is a more appropriate model of the God of the theologians.

5 Time and human nature

The majority of this article has focused on the relationship between God and time, but the story would be incomplete without reference to humanity. There are many relevant points of focus that could fall under a ‘Time and Human Nature’ heading, but the two of relevance to theology are freedom and divine foreknowledge on the one hand, and salvation and eschatology on the other.

5.1 Freedom and divine foreknowledge

If God possesses the property of divine omniscience, then God has perfect knowledge of everything that it is logically possible to know. This means that God has perfect knowledge of everything that ever happens within the cosmos (past, present, and future, if you subscribe to a theory of time that endorses the reality of tense). Many Christians, however, also place significant emphasis on the importance of libertarian freedom, namely the kind of freedom that allows agents to choose between a set of genuinely viable options. Although there is also a rich history of affirming determinism for theological reasons, libertarian freedom is something many (especially contemporary) Christians do not want to give up. If an agent has libertarian freedom, then they are free to choose between, for example, wearing brown shoes or black shoes to an upcoming job interview, and until they make that decision on the morning of the interview, both options are genuinely available.

Libertarian freedom is often claimed to be integral to the notions of moral and soteriological responsibility and those who endorse this position argue that because of this it ought not to be abandoned within a Christian framework. Vicens and Kittle point out that free will is often defined as ‘the control required to be morally responsible’ (Vicens and

Kittle 2019). Freedom and responsibility are frequently intertwined in both philosophical and theological reflection, as it has often (though not invariably) been thought that to be morally responsible for an action one must have freely chosen that action out of a range of genuine alternatives. The intuition here is that I can only be responsible for performing an action if I had a choice about whether to perform it (ruling out actions that involve coercion, force, duress, etc.). But if I never have a choice about my actions, even when I'm not forced into choosing them (i.e. if some form of determinism is true), then perhaps I am never responsible (there is a rich history that cannot detain us here of work that examines the compatibility of freedom and determinism, but for those interested readers who wish to learn more about this – particularly its relevance to theology – see Vicens and Kittle 2019). It is worth noting that libertarian freedom is not univocally believed to be the only type of freedom that produces moral responsibility. Nonetheless, an extended defence of the importance of libertarian free will for Christianity is made by Swinburne (2013).

The following problem has been raised for the compatibility of human freedom and divine foreknowledge: if God knows the colour of the shoes you will wear to the job interview before you have put them on, then it seems as though you never really have a choice about which colour to pick. An omniscient being possesses infallible foreknowledge, meaning that if God knows that you will wear black shoes to the interview then it is the case that you will wear black shoes to the interview. Wearing brown shoes was never an option. But libertarian freedom requires us to have choices between multiple real options, so if God knows what you will do before you do it then you do not actually act freely, or so the argument goes. On the other hand, if God does not know which shoes you will wear, then is God really omniscient? If there is a fact about which shoes you will wear, namely if the proposition 'you will wear black shoes to the job interview' is true, then an omniscient God must know it. So it appears that the theist must choose between libertarian human freedom and divine omniscience. In fact, the problem may be even greater than this. As Vicens and Kittle write:

> the worry that arises in connection with free will here is that if God has complete control over all He has created – if God is sovereign over absolutely everything that comes to pass (as would seem fitting) – then there appears to be little room for any human *agency* at all, let alone human *freedom*. (Vicens and Kittle 2019: 3, original emphasis)

Fortunately, both the atemporalist and the temporalist have come up with solutions. Vicens and Kittle sort such responses into foreknowledge-compatibilist responses and foreknowledge-incompatibilist responses. The former claim divine foreknowledge and human freedom are compatible and the latter deny this, leading them to reject either divine foreknowledge or libertarian freedom.

The divine atemporalist's solution to this problem is to claim that God is outside of time, able to view all events at once. Therefore God atemporally knows what you will wear to the interview, because elsewhere in the block universe (the temporal model that often goes hand in hand with the atemporal God) it *is* the day of the interview, and you *are* wearing it. God knows and sees all moments of creation from the divine atemporal perspective, as in Aquinas' mountaintop metaphor. He does not know what you will do before you do it, because an atemporal God does not enter into temporal relations with temporal beings. Instead, he atemporally knows it. This is a form of foreknowledge-compatibilism. Whether this actually solves the problem is a matter of contention (see Deng 2019: 37–38 for further discussion).

The divine temporalist can respond to this problem by endorsing a position known as open theism. Open theism takes seriously the caveat to divine omniscience that states 'an omniscient being knows everything that it is logically possible to know'.

Such open theists endorse an A-theory of time, whereby the future does not yet exist (e.g. Presentism or the Growing Block), and reject hard determinism, according to which there is a single fixed future determined by the laws of nature and the initial conditions. According to open theism, the future is open and there are no facts about what a free agent chooses until they choose it. In other words, it is not logically possible to know which shoes you will wear to the job interview until you put them on, meaning humanity can remain free and God can remain omniscient. This response is a foreknowledge-incompatibilist response insofar as it denies divine foreknowledge about certain contingent future facts (namely the free decisions of agents). The open theist sees no problem in making this move, however, because they also deny that foreknowledge is required for omniscience. A final, incompatibilist, option is to deny that humans have libertarian free will. Theological determinists, such as those who subscribe to the Calvinist doctrine of predestination, fall into this camp. As this brief discussion demonstrates, there are a variety of options.

5.2 Salvation and eschatology

5.2.1 Salvation

The final areas of Christian thought that are relevant to time are the interrelated doctrines of salvation and eschatology. Christian theological accounts tend to envisage salvation as involving a process of chronological transformation. For example, Augustine's idea of Christ as a physician who both causes and superintends the healing process in a patient. However, a salvation-transformation, at least the kind of personal transformation that an individual might undergo in their lifetime, looks rather different depending on whether you endorse an A-theory like Presentism or a B/C-theory like eternalism. Salvation requires change, and this change is generally thought to be a total, ontological transformation, of

the kind that brings the individual into a new state of being and a far deeper relationship with the divine.

Ben Page examines such ontological transformation, particularly as discussed in St Paul's second letter to the Corinthians: 'if anyone is in Christ, there is a new creation: everything old has passed away; see, everything has become new' (2 Cor 5:17). Page notes that a key feature of an ontological transformation is that it affects the physical, mental, and spiritual dimensions of an individual's personhood (Page 2018: 526). Such a transformation may take place via 'mixing', in which an individual's ontology becomes combined with either created grace or the Holy Spirit, or 'radical replacement', in which the individual is ontologically transformed through the replacement of some of their temporal parts from sinful parts to saved parts.

An A-theory of time can easily accommodate this latter kind of transformation. If time passes, and humans are comprised of temporal parts (as in a perdurantist theory of identity), then an individual's temporal parts are continuously replaced at every new moment of time. An A-theory allows God to create the individual anew with saved parts, replacing the old fallen parts, and thus the individual has undergone a complete ontological transformation with respect to those parts. The sinful parts are truly gone. Andrew Hollingsworth makes a similar point, arguing that the only temporal ontology compatible with the true elimination of sin from both humanity and creation is Presentism, because, on any theory committed to the concrete existence of past moments, 'past evils and sins would "still" exist (for God at least) and would not be truly eliminated' (Hollingsworth 2024: 2).

As such, the Eternalist Block Universe view has a harder time accommodating a salvation-transformation. According to M.O. Fiocco, 'an entity changes if and only if it *in itself is one way at one moment and an incompatible way at a distinct moment*' (Fiocco 2014: 89, original emphasis). Similarly, D. H. Mellor writes: 'changes are things having, at different times, incompatible properties, i.e. properties that no one thing could have at the same time' (Mellor 2012: 169). In the static temporal ontology of the Block Universe this is evidently troubling, as all objects (including human persons) always exist, extended throughout space-time like a four-dimensional worm. Thus, each iteration of that object at each moment of its life always exists. In what sense, then, can we say an individual can undergo the type of transformation required for salvation? A salvation-transformation requires the kind of change in which the same entity possesses different properties at objectively different times. This type of change requires a kind of newness that seems incompatible with the metaphysics of the block universe. Entities change when they possess new properties that they did not possess before. I have undergone a salvation-transformation because I was fallen at some past time, and I am now saved in the present. This does not seem compatible with the Block Universe, or indeed any temporal ontology

committed to the existence of the past. A solution to this problem has been offered by Emily Qureshi-Hurst which involves reconceptualizing the salvation transformation as a subjective rather than an objective, robust, ontological change (2022b; 2022a).

5.2.2 Eschatology

According to Christian eschatology, at the end times, (maybe a select few, maybe all) persons are raised from the dead and redeemed, reaching the eschatological goal of creation by being transformed into a 'new creation' characterized by eternal life and unity with God. This resurrection is believed to echo Christ's resurrection insofar as it involves the physical body and not just an immaterial soul. Your body will 'be raised imperishable, and […] will be changed' (1 Cor 15:52). The same is believed to be the case for the rest of creation. Rom 8:18–30, for example, speaks of the groaning of creation and the promise of eschatological redemption for the entire physical universe. Thus eschatology traditionally requires (1) that physical creation persist in such a way that it can be transformed into a new creation, and (2) that the physical bodies of human beings can be raised to spend eternity with God.

The problem is, if Presentism is true, as many theists claim, then the physical body vanishes into the non-existent past after death and decay has set in. Even more troubling is that General Relativity predicts that the entire universe will end in one of two options: freeze or fry. Freeze refers to the heat death of the universe and predicts that over many billions of years the universe will reach maximum entropy whose temperature tends toward absolute zero, leaving a freezing and definitely uninhabitable soup of black holes and radiation. The latter, fry, is essentially the reverse of the Big Bang, namely a cosmic contraction in which galaxies rush toward each other leading to the eventual implosion of the entire universe into an extremely hot, infinitely dense and definitely uninhabitable singularity. Robert John Russell puts the problem this poses for Christian eschatology as follows:

> For those who defend the bodily resurrection […] the challenge is obvious and severe: if the predictions of contemporary scientific cosmology come to pass ('freeze' or 'fry') then it would seem that the universe will never be transformed into a new creation, that there will never be a general resurrection, and this, in turn, means that Christ has not been raised from the dead, and our hope for resurrection and eternal life is in vain. (Russell 2002b: 267)

Fortunately for the theist, several solutions to this problem have been sketched out. These typically lean upon the resurrection of Jesus as the sign of what a new creation might be like and how a physical body might be resurrected, despite the possibility of a freeze or fry ending to the universe (Polkinghorne 2002; Ward 2002; Russell 2002a; 2002b; Wilkinson 2010). Each of these is discussed in detail by Qureshi-Hurst 2022a.

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