

Transcendent Temporality: A Trans–dimensional Model of God’s Free Relationship to Spacetime

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Abstract: This paper looks at several key motivations behind the prisoner of time objection and a view against which it is leveled, the Oxford School of divine temporality, with respect to the Christian God. Shared between these opposing views are concerns for divine freedom and sovereignty. While the objection, coming from divine atemporalists, has in its background a concern for the creator–creature distinction, the Oxford School prizes the authenticity of temporal God–talk in the Scriptures and the coherency of human God–talk more generally. By following these motivations closely in conversation with M–theory discussions about the nature of time as a dimension of spacetime, I propose a new model of God’s relation to time called transcendent temporality. In it, God is transcendentally present in our temporal dimension, so that he is temporal but experiences our time differently than we do. Moreover, God has his own time which is distinct from but correlated to our time. God, on this view, is temporal, but in a way that he can experience succession in different ways than our one–directional and linear experience of succession. I conclude by unpacking some implications of this model and addressing possible objections.

Keywords: Divine temporality, M–theory, Spacetime, Creator–creature distinction, Dimensions

Introduction

The coherence of the Christian faith, with respect to God’s relationship to a temporal world, has had a plethora of approaches. These approaches can generally be put into one of two categories: divine temporality and atemporality. In the first, God exists and operates exclusively within time. This means that God has succession and

change in his life. Time is, at least within the Oxford school of divine temporality (hereafter OSDT), an essential part or “necessary concomitant of his being.” (Mullins 2014, 165) Alternatively, those who argue for the timelessness of the Christian God maintain that God must be outside of time to prevent Him from being confused with or a part of the created order. Thus, God would not experience change (even potential change) or succession in his life. As accounts of divine temporality, such as OSDT, have risen in popularity, objections have come from divine atemporalists.

One interesting objection is the “prisoner of time” objection (hereafter POT). This objection states that divine temporality makes God out to be trapped in creaturely time, so that his sovereignty and freedom are limited by time. Because those who proffer this objection and the defenders of OSDT are operating with different metaphysics of time, metaphysics cannot offer a basis for adjudicating this conflict. Rather than starting with a given metaphysic to then build a model of God’s relationship to time, a model will be offered in this article which can capture and account for various motivations and intuitions behind OSDT accounts as well the accounts which proffer this POT objection. Because this article will focus on offering a model which can capture theological and philosophical motivations from both sides of the debate, there will not be space to assess which metaphysic of time would best fit this model. However, there will certainly be implications from this model which will hopefully aid in choosing a helpful metaphysic for this model in future work. This approach, I believe, can offer a potential way forward in the impasse between at least one version of divine temporality and the general intuitions which drive many divine atemporalists. In critical engagement with this objection and OSDT responses to it, I will offer a model of God’s relation to spacetime in conversation with M–theory, a theory of quantum physics that unifies the consistent versions of string–theory, which itself explains particles and fundamental forces in models of vibrating strings.

I begin by laying out cases made for divine atemporality and OSDT with respect to the POT objection. I will identify two shared motivations and one motivation unique to each side of the debate. These motivations are theologically significant and provide a basis for mediating the disagreement. Then, by resourcing M–theory models of dimensional spacetime, I provide further content and structure for understanding time. These models are trans–dimensional, showing analogous relationship between higher and lower dimensions of space and time. On this basis I will propose a new model of God’s relation to time, one in which God transcendentally is temporal, occupying but not being limited to creaturely time. This model will be shown to better capture the shared and distinct motivations behind the POT objection and OSDT responses.

1. Divine Atemporality, Temporality and the POT Objection

Between OSDT and the POT objection, time has been generally described as potential change or succession.¹ In the POT objection, divine atemporalists object that divine temporality puts God under the “rule” of time, the same as any other creature of his created order. God is a prisoner of time, in such a construal, because he is necessarily subject to it, existing temporally by his very nature and unable to exist without succession. Such a construal of God’s relationship to time, for atemporalists, puts into question God’s divine sovereignty and freedom. Mullins summarizes the objection like this:

God, prior to the act of creation, exists in an unmetricated time. God’s life is one conscious mental event without any intrinsic change. However, when God chooses to create He breaks this changeless event and becomes—gasp—a prisoner of time! He can no longer go back to the prior state because He is now enmeshed in the relentless flow of time where His life is stretched out with segments of it lost in the irretrievable past. (Mullins 2014, 167)

It is important to note exactly what is meant when the POT objection is leveled. I take there to be two key elements to this objection. God, according to OSDT, exists prior to creation in unmetricated succession, being without measurable intrinsic change in his life. (Zimmerman 2002, 83–84) God is in a state of unmetricated temporality, having a specific relationship to time in which intrinsic change and succession are merely potential. God then freely acts to create the world, becoming necessarily trapped in another state with a more immanent relationship to time, so that his life takes on metricated succession and actual intrinsic change. Metrication is the measurability of the change in God’s life, so that one moment can be distinguished from the next in virtue of the temporal change. God is unable to return to the first state and relate to time as he once did. Moreover, time appears to function here, even as a necessary concomitant of God’s being, as a separate entity from God. If this is the case, there is something which is not God to which God is subject. God necessarily takes on temporal change and succession when creating and cannot do otherwise, challenging God’s sovereignty over that entity of time.

¹ While divine temporalists and atemporalists agree that God has no beginning or end, there is disagreement on whether God has potential change or succession in his life. It is in virtue of this succession that God would have temporal location or extension. That it is metricated means time is measurable in concrete terms. (Mullins 2014, 162–164)

While many cases have been made against OSDT which claim that it is incoherent, this particular objection is rather made with concern for the conceptual costs of holding a coherent OSDT account. (Weinandy 2009 and Long 2009)² The question remains as to whether this is something OSDT is truly guilty of, or if there is perhaps a way forward in holding to God's temporality while giving proper credence to these theologically rooted concerns.

The Case for the Timeless God

To answer this question, it would serve us best to lay out some key concerns motivating POT objections and do the same of OSDT. This will ensure that the parties involved are not talking past each other. The POT objection has at its heart two key theological concerns. Helm's version of the POT objection takes divine temporality to be "incompatible with divine sovereignty, divine perfection, and with that fullness of being that is essential to God." (Helm 2002, 122) Elsewhere, Helm argues that divine sovereignty is impossible for a God whose freedom is restricted by time and space. (Helm 1988, 112) Underneath the concern for divine sovereignty is a deeper concern more widely shared by divine atemporalists for divine freedom. Brian Leftow, for instance, argues that divine timelessness does not restrict human freedom, operating with a different understanding of sovereignty than Helm, but still resting the defense of that sovereignty on divine freedom. (Leftow 2018, 250–251) Leftow's argument further does not seem to hinge upon divine sovereignty as Helm's does, but he goes to great lengths to defend divine freedom in a way consistent with Helm's deeper concerns. (Leftow 218, 301)

Yet even with this point of divine freedom distinguished from the concern for sovereignty, there still exists a broader concern for divine sovereignty. This indicates that there are further concerns beyond divine freedom motivating divine atemporality. While the sovereignty defense is usually tied to the position that time is a created entity, it is not exclusive to it. The existence of time as a created entity is rejected by many OSDT accounts. Yet the creation of time and divine lordship over time are not the same. All that needs to be said of time for it to be a thing which is subject to God's lordship is that God determines its order.

Another way of putting this is to say that God is ontologically responsible for the ordering of a thing, so that God makes a thing what it essentially is according to his will. This is at the root of the sovereignty argument, which takes any sense of time

² These two scholars proffer the view that OSDT is incoherent on the assumption that time is part of the created order. In Mullins' defense of OSDT, he simply eschews this claim, stating that time is neither part of the created order, nor is an independent and uncreated reality. (Mullins 2014, 165)

which is not determined by God as something which therefore imposes upon God's ability to determine created order. (Helm 2002, 120–123) This is true even for something which is traditionally thought to be ordered necessarily in correspondence to the order of God's own being, such as the *imago Dei* in human persons. (Gunton 1991, 61) Human creatures are not God, being distinct from him as members of the created order, and yet are ordered necessarily in a way that reflects God's own personal being. Even as we would say this, we would not say that this ordering of human beings is something to which God is subjected, but rather that God determines humanity to be what it is essentially. Underneath the sovereignty concern, therefore, is a concern for this distinction of creator and creature. It is by his lordship that we are ordered in a way that corresponds to God's personal being. Even if we are to say that God necessarily orders creation temporally because he is temporal in himself, we still must understand that ordering activity as God's lordship over time and not as something to which he is subject. There must be a creator–creature distinction between how God relates to the temporal ordering of creation as its determiner and how creatures relate to it.

Response from the Oxford School of Divine Temporality

There have been several responses to this objection returning from the OSDT. Setting aside the objections of internal incoherency, which have been left on the cutting room floor by those such as Mullins and Padgett willing to bite the bullet on time having no beginning, we are left with objections which see divine temporality as a threat to God's divine freedom and lordship over temporal order. (Mullins 2014, 166) Mullins' response focuses on how we understand properly God's sovereignty and the fullness of his divine life as a temporal being. (Mullins 2014, 166) Common themes are found throughout OSDT responses which motivate the necessity of God's temporality. I will focus on what I take to be three key motivations among these themes: the authenticity and coherency of God's engagement with a spatio-temporal world through temporal actions, the coherency of our temporal talk about God's life, and the necessity of God instituting temporal order in his act of creation.

The first motivation is more of a surface observation. OSDT attempts to take seriously the temporal nature of God-talk in the Scriptures, especially narrational sections which appear at face value to depict God changing his mind, (Gen 18:16–

33)³ God experiencing and acting in a temporal event, (Gen 1)⁴ or God speaking about succession in his own life. (John 8:48–59)⁵ Even advocates of OSDT readily admit that there is nothing in the text that necessitates one take a particular view on the philosophy of time; the Scriptures simply aren't clear on what time is and how God relates to it.⁶ It is my intuition that these sorts of readings of temporal language in Scripture hope to take seriously and plainly the narrative of Scripture and the authenticity of the temporal God-talk that it offers. Even if one were to find in the philosophy of time the most air-tight argument for a timeless God, the sheer volume of temporal language predicated of God in the Scriptures cannot be so *easily* set aside. The authenticity and coherency of biblical God-talk further begs the question of our own God-talk.

I see this as the second motivation behind OSDT. One might be able to excuse temporal God-talk repeated verbatim from the Scriptures because it holds a certain authority and replicability in Christian theology despite the involvement of human language and human authors. (2 Tim 3:16–17) Yet one could excuse Scriptural references to divine temporality while still problematizing the authenticity of our own contemporary God-talk put into temporal terms. This is to ask, “how authentic and coherent can our God-talk be if we are merely temporal beings speaking of an atemporal God?” If we are to be able to make any claims about God with respect to time, there would need to be some assumptions about an analogous relationship between God's experience of time and our own. This is problematized in atemporalist construals of God's relationship to a temporal world, as Mullins points out, because accounts which relate a timeless God to temporal objects come up either

³ God initially pronounces judgement on Sodom, and then proceeds through a successive discussion with Abraham, with each stage of the discussion consisting of a new judgement of God as to how he will treat Sodom in light of Abraham's most recent plea.

⁴ God acts in succession here, creating some different aspect of the cosmos each successive day and resting on the seventh day.

⁵ Even in a merely relative sense, the God-human speaks of his pre-incarnate self as being temporally prior to Abraham, thus implying some kind of temporal self-understanding of God's own being in relation to his creatures.

⁶ Leftow argues for the eternity of God, but demonstrates how this concept has a very specific and minimal definition which includes “no claim about time's nature or structure.” This is especially true of the Hebrew Bible/OT, where most of the apparent conflicts with atemporality are found. Any view one takes, Leftow goes on to demonstrate, requires some philosophical and/or theological interpretation in addition to the bald content of Scripture. (Leftow 2005, 51) A similar conclusion is made by Gershom Brin. He perceives eternity in rather minimal terms which, at least at first glance, could be used by both divine temporalists and atemporalists. (Brin 2001, 103)

incoherent or obscure on how this relation actually works.⁷ At stake, then, is the authenticity of the God–world relation which seems to be assumed by the Christian theological task of knowing and praising a God who loves and is present in a spatio-temporal world.

This second motivation behind OSDT is answered by the third; that time is God’s way of instituting his order on creation so we, his creatures, might make sense of it. T. F. Torrance writes,

Since the whole realm of space and time is maintained by God as the object of His creative knowledge and power, space and time are to be conceived as a continuum of relations given in and with created existence and as the bearers of its immanent order. Apart from space and time nature would be indeterminable and unintelligible, for it would have no sequences or patterns of change and no series of continuous coherent structures and would thus be incapable of any kind of meaningful formalization. It is to space and time, therefore, that we have to look for the determinate and intelligible medium within which God makes Himself present and known to us and within which our knowledge of Him may be formed and grounded objectively in God’s own transcendent rationality. (Torrance 1997, 61)

Such is the role of temporality in OSDT’s conception of God’s creative action. This is similar to the sovereignty claim of divine atemporalists. God must be, according to this motivation, ontologically responsible for time, making it fundamentally what it is. (Padgett 1989, 209) God chooses this freely in choosing to create, determining the temporal and spatial ordering of creation. Therefore, the concerns for divine freedom and lordship over time held by atemporalists are shared by OSDT. (Padgett 2003, 129) Here in we find at least some common ground by which to proceed between these conflicting views. From here, we might press forward towards maintaining the authenticity of Scriptural God–talk as well as our own temporal talk about an eternal God amidst the creator–creature distinction.

⁷ Mullins has in mind four–dimensional eternalism and ET–simultaneity. (Mullins 2014, 174ff) The former is championed by scholars such as Katherin Rogers, T.J. Mawson, and Don Lodzinski. Mullins goes on to demonstrate the conceptual costs of this view, which has differing assumptions about the metaphysics of time to begin with. ET–simultaneity comes from a paper by Eleanor Stump and Norman Kretzmann, which contends that God is atemporal in his being but is able to be present at temporal events with temporal beings. (Stump and Kretzmann, 1981) Mullins argues that this model is obscure as to how this is metaphysically possible and so is not particularly helpful for explaining God’s relation to time. While the model in this paper does proffer that God is both in and beyond our time like ET–simultaneity, I will show below that it does so in a very different way than Stump’s and Kretzmann’s model.

2. Trans-Dimensional Models of Time and Space

OSDT seems to be at an impasse with its divine atemporalist critics. While this may be the case, I do not think that the key concerns motivating the POT objection and the responses to it are mutually exclusive. We require, however, a logical model which can sustain these motivations. Moreover, it would be helpful to have more content about the nature and structure of time to appeal to as a way of mitigating some of the key disagreements between the two camps. The ways in which M-theory relates time and space can offer us helpful tools for logically and metaphysically modeling God's relationship to time, as well as provide helpful content for talking about what time is and how it is structured in relation to other cosmic realities.

Dimensions of Spacetime in M-Theory

M-theory has a particular understanding of time as a dimension much like three-dimensional space (or three space). In point of fact, time has been considered unified as a dimension of existence with dimensional space since the work of Minkowski. (Horwitz 2005, 2) M-theory dimensions are those metricated ways in which objects occupy spatial or temporal existence. This is understood in a way which warrants analogical talk between spatial and temporal dimensions. According to M-theory, there are ten spatial dimensions and at least one temporal dimension. (Greene 2011, 203) Spatial and temporal dimensions are analogous to one another in a way similar to how our typical three dimensions of space are analogous to one another. Greene gives the example of an object's speed through spatial and temporal dimensions, writing, "since this view proclaims that space and time are simply different examples of dimensions, [we can] speak of an object's speed through time in a manner resembling the concept of its speed through space." (Greene 2011, 50) He goes on to show how each dimension, including time, provides a different independent metric for measuring an objects speed, but that in fact each dimension does measure the same aspect in ways analogous to the other independent metrics.

It is for this reason that equations like the Minkowski equations for points in n dimensions always have a time metric by which they are also measured.⁸ The way this is noted, so that time and space are united but measured in distinct ways is

⁸ Minkowski space is represented with the formulation M_{n+1} where n is the number of spatial dimensions and 1 stands for the time dimension. This assumption of the temporality of space has been carried over into other spatial formulations, such as Anti-de Sitter space equations. (Zweibach 2009, 543)

significant. I am not the first to attempt to make claims about God's relation to time by drawing on this analogy between space and time. However, many of these other accounts treat this temporal dimension as functionally equivalent to a higher spatial dimension rather than treating it as functioning as a separate but analogous *set* of dimensions.⁹ Rather than treating time as a higher dimension which transcends three-space, I will show how, per Minkowski space, an object that can transcend our dimension of time could exist or be present temporally in a non-reductive way similar to how objects with higher dimensions of space can exist non-reductively in lower dimensions of space. In other words, temporal dimensions relate to one another in a way analogous to how spatial dimensions relate to one another. Because time and space are united in this way, we can likely say similar things on this model about God's presence in time as we can about God's presence in space. However, due to the spatial constraints of this paper (pun intended), the exploration of God's transcendent spatial existence will need to be saved for future work.

As will be shown throughout the paper, this understanding of Minkowski space allows for a more nuanced approach to the analogies between space and time. The analogy between dimensions is thus described as independent directions of measurable space and time. (Greene 2011, 202) The relationship between spacetime dimensions is therefore analogous to the extent that one can measure a given object according to that dimension.

This does not, however, mean that every object is measurable in every dimension. Indeed, many of the extra dimensions in M-theory are compactified, which is generally taken to mean that a given extra dimension of space (beyond the three "common" spatial dimensions) is curled up to fit within a small radius. (McMahon 2009, 153–154) This means that there could be small "pocket" dimensions of space which fits within three space. These dimensions could overlap, intersect, or run completely parallel to one another. It has also been theorized that the three common

⁹ This includes if we think of temporal dimensions as a set of one. Linda Zagzebski is one example of someone drawing in the spatial analogy. (Zagzebski 1992, 172–179) Similar to the below treatment Abbot's *Flatland*, Zagzebski draws on the analogy between temporal existence and spatial existence, treating time as a fourth dimension that is directly analogous to the common three dimensions of space. In this account, God is a four-dimensional object that occupies but is not limited to three-dimensional space. While the relation between higher and lower dimensions is properly captured in this account, time is treated functionally as if it were a higher dimension of space as opposed to being treated as a set of dimensions that relate to one another in a way analogous to the way spatial dimensions relate to one another. Stump and Kretzmann make similarly analogous claims between time and space. (Stump and Kretzmann 1981) Abbot's work is similarly drawn on in their ET-simultaneity account. Further distinctions between their work and the present article are discussed below.

spatial dimensions could just as easily exist within larger spatial dimensions. (Horwitz 2005, 3)

As a final comment on the nature of time in M-theory, not every advocate of the theory agrees that there is a single time dimension. Some have speculated that there could also be extra time dimensions. (Greene 2011, 204) Like spatial dimensions, these extra time dimensions could be compactified within the “normal” spatial dimension or be a temporal dimension which itself contains three space and the normal time dimension. Greene theorizes that such extra dimensions would be distinguished by how they are experienced, since our ability to distinguish between one spatial dimension and another is predicated on our metrication of them. (Greene 2011, 204–205) He gives the example here of how in a circular and compactified extra spatial dimension into which a small ant walks, the ant would walk in a straight direction but continue to end up in the same spot as if walking in a circle. The ant’s experience of spatial direction in this compactified dimension is different. Likewise, Greene speculates that if one were to somehow pass through a compactified extra temporal dimension, one would experience the succession of time differently, possibly even returning to a previous moment within that temporal dimension. (Green 2011, 204–206) Such an extra dimension would be completely beyond our current experience of time which, according to both string theorists and OSDT advocates, is absolute and one-directional with regard to succession. (Mullins 2014, 165) By absolute, it is meant that time exists independent of our perception of it and proceeds in a consistently metricated way whether or not the change is noticeable. In other words, only the *potential* for change is required to say that time is absolute. By one directional, it is meant that the succession of time proceeds from moment t_1 to later moment t_2 so that what happens at moment t_1 can causally affect what happens at t_2 , but what happens at t_2 cannot causally affect what happens at t_1 . Past moments are irretrievable. An extra dimension of time would likely be a different experience of temporal change and succession than this experience of absolute and mono-directional time, though one which is metricated in a way analogous to our current understanding of time in the same way that extra spatial dimensions are metricated in a way analogous to our common understanding of three space.

The Relationship Between 3D and 2D Polytopes

To help illustrate this analogous relationship between extra and common dimensions, I will appeal to multiple models of spatial analogy between dimensions. The analogous relationship between spatial dimensions will aid us in describing a broader sense of the analogy between spatial and temporal dimensions appropriate

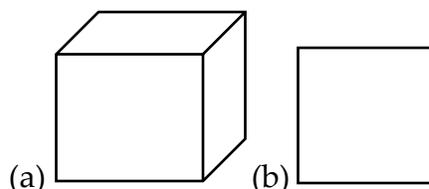
to M-theory. The correlated senses in which each dimension of space is independently measurable is modeled with objects called polytopes. These are objects which have a corollary object in each measurable dimension of space. An example of this is a straight line, a square, and a cube in one, two, and three dimensions respectively.

One way to explain the relationship between correlated polytopes is to imagine each shape extended along a new axis of measurement. Each axis by which the object is extended represents a new dimension of space which the object occupies so long as it is perpendicular to all other axes of spatial measurement. Let us imagine, for example, a one-dimensional line which measures, or occupies the one-dimensional space of two meters along an x -axis. It is then extended along a perpendicular axis, y , by two meters. This creates a two-dimensional object, a square, occupying two meters squared of space according to both the x and y axes. If we imagine a third z -axis which is perpendicular to both the x and y axes, we can extend our square by two meters along it to occupy a third dimension of space, and thus to occupy two meters cubed of space. This object is called a cube. Each of these three objects represents a correlated polytope, representing the same amount of analogous space occupied in one, two, and three dimensions.

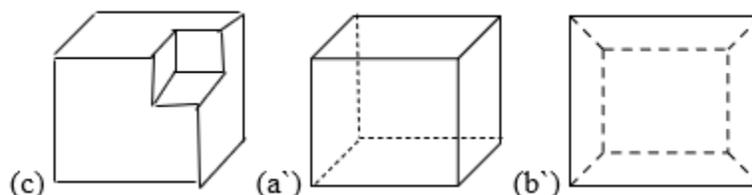
While the two-dimensional square can occupy the space of the one-dimensional line, it cannot be reduced to the space it occupies in that dimension. Rather, it can be said to occupy both the first and second dimensions of space. The same can be said of the relationship between third and second-dimensional polytopes. A two-dimensional square can occupy the entirety of two out of three of the cube's dimensions. Such correlated objects can, in this way, occupy the same space. However, it cannot be said that the objects are identical, nor can it be said that they occupy identical space. Rather, the square can be said to fit inside of the space of the cube. While the space of these two objects are related, even overlapping, they are not reducible to each other and are distinguishable by the number of metricated axes which determine their space.

Because of the relationship between these objects, it is possible to model a three-dimensional object using two-dimensional shapes. The nature of these models, rooted in the logic of the relationship between the second and third dimensions, is what will help us to explain the relationship between God and time. Returning to our example of the square and cube, a model of a cube can be drawn on a two-dimensional plane using only two-dimensional shapes, including the square. Possible ways of modeling the cube in a two-dimensional way are shown in figures (a) and (b) below. I am calling this a trans-dimensional model, as it models an object of a given dimension in another dimension, transcending our conceptual

understanding of one dimension with that of another dimension. However, these figures can easily be confused for mere two-dimensional shapes. In point of fact, they are two-dimensional shapes representing various perspectives of the three-dimensional cube on a flat page or screen. Figure (b), for instance, appears no different than a two-dimensional square despite being an accurate depiction of a cube from a certain two-dimensional perspective.



These representations, furthermore, can be deceiving. For instance, it is possible that figure (a) is a two-dimensional square and two parallelograms, but that we are assuming that it has three-dimensional depth. Figure (a), as well, could just as easily be a cube, having four right angles on each of its planar faces, as it can be a warped cube, having four right angles only on two faces. Without more models to confirm our two-dimensional perception of this cube, either is possible. Either figure, furthermore, could have the same shape as a cube from this perspective, but have a distinct shape from a different perspective, as shown in figure (c) below. We can add further notation to clarify this, as in figures (a') and (b'):



Yet even these more detailed models could be misconstrued. While we can safely eliminate misinterpretations of certain aspects like the representational meaning of dotted vs. solid lines, with dotted lines being edges behind our two-dimensional view of the cube's faces, there is still the possibility of multiple interpretations of each shape. The various vertices could be either concave or convex, or the overall shape could, as previously speculated, be warped so that only one face is a true square. There is only so much two-dimensional models can do to represent a three-dimensional shape.

Now it does not follow these representations are untrue. This only illustrates that a two-dimensional model does not have the capacity to capture the fullness of three space. Each model can only capture some aspect or perspective of three space. Specifically, it can capture two dimensions of three space. To truly confirm this polytope through two-dimensional models, we would actually need an infinite number of two-dimensional models, having a depth of zero, which bisect the cube at an infinite number of points of depth. Imagine slicing the cube along its z -axis an infinite number of times, such that we had an infinite number of two-dimensional squares which, when stacked together, formed the cube. Both because they are infinite and are arranged along an axis which does not exist in two space, we are justified in saying that however accurate a two-dimensional model of a three-dimensional object is, two space can never *contain* three-dimensional objects. A three-dimensional object, however, can occupy two-dimensional space, and can thus be said to exist (non-reducibly) two-dimensionally. A similar thought experiment could be conducted between the one-dimensional line and the two-dimensional square. Thus, the point is demonstrated that for any polytope with n dimensions, it is possible to make limited yet true models of a corollary polytope with $(n + 1)$ dimensions, so that the space which the n polytope occupies is directly analogous to the space which the $(n + 1)$ polytope occupies. The $(n + 1)$ polytope occupies n dimensions, but not *merely* n dimensions.

Conceptual Models of Extra-Dimensional Polytopes

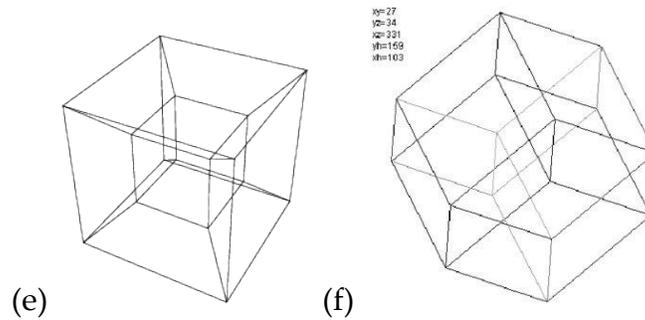
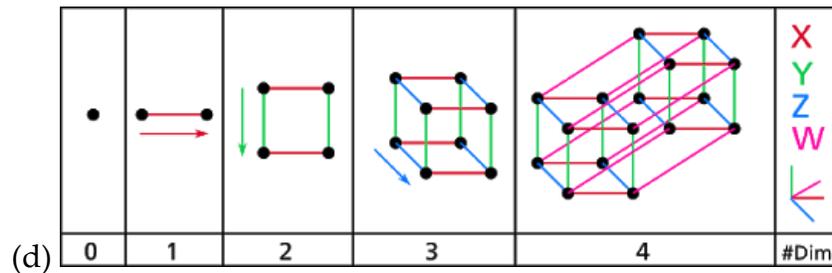
The question then must be asked: how far can we build conceptual models of dimensions beyond our own spatial existence? This is important if we want to talk about the analogy between common and extra dimensions of spacetime. Could we make a true yet limited model in three dimensions of an object which is “extra-dimensional,” having more dimensions than the common three spatial and one temporal?¹⁰ Here I will offer three such models, each of which will explain a significant aspect of trans-dimensional modeling.

The first conceptual modeling of extra-dimensional polytopes in lower dimensions is known as the tesseract or four-dimensional hypercube. While these terms are widely recognized for their role in the Marvel Cinematic Universe, these properly refer to the four-dimensional polytope corollary of the cube. A hypercube, being analogous to a cube in the same way a cube is analogous to a square, is a

¹⁰ While some have argued for some extra dimensions to be considered as more common, three dimensions of space and one dimension of time are considered “common” broadly in the literature on M-theory.

spatial extension of a cube along a fourth z' axis which is perpendicular to the x , y , and z axes described in the previous section. (Gardner 1966, 138–143) As beings which spatially exist three dimensionally, we cannot conceive of a fourth direction which would be perpendicular to x , y , and z . So, we use two and three–dimensional models to demonstrate what a four–dimensional object would look like when occupying three space.

The tesseract was introduced to demonstrate the possibility of a fourth spatial dimension. (Krikke 2018, 43) However, because humans are generally thought to experience and comprehend only three dimensions of space, this model ended up also demonstrating the possibility of both two and three–dimensional models of four–dimensional objects. Figures (d)¹¹, (e)¹², and (f)¹³ below each demonstrate a different perspective of the tesseract “unfolding” in three space.



In (d) and (e), one can easily see the extension of the cube’s three dimensions of space in a fourth direction. However, both show this in a three–dimensional direction that is a composite of x and y which merely represents the fourth perpendicular axis z' . While (d) shows this in a way similar to our two and three–dimensional modeling in the previous section, (e) shows a “folded–up” tesseract, with the z' axis extending internally. This is done typically to demonstrate how four space contains three

¹¹ (Wikimedia Commons, n.d.)

¹² (Weisstein, n.d.)

¹³ (Mason, et al 2010, 2)

space, so that the extension would appear to our three-dimensional perception as eight cube-like cells folding in on one another. (Weisstein, n.d.) This is shown further in (f), where the various cells appear to overlap one another in three space despite actually being an externally extended four-dimensional object. (Mason, et al, 2) This is not unlike figures (a`) and (b`) where the third dimension of extension appears to be internal to or overlap the two dimensions of the square. Mason, et al note that any dimensional condensation is necessarily going to lose spatial information, thus appearing like the object is in multiple locations in three-space or overlapping itself. What these two or three-dimensional models show is not only the limitedness of extra-dimensional modeling, but the strangeness to lower dimensional experience of those higher dimensional objects. Such objects would appear to the three-dimensional observer to overlap, appear multiply-located, or even to be partially missing from perspective. Simply put, four-dimensional objects are able to occupy three-dimensional space, but in such a way that they would experience it differently than three-dimensional objects.¹⁴ Likewise, four-dimensional objects would be experienced in these different ways by three-dimensional observers. This is because four-dimensional objects are able to transcend three space, being able to occupy those three dimensions of space without being contained by them.

Although this relationship between three and four space has been explained mathematically and quantum mechanically, probably the most helpful illustrations come from the Edwin Abbott's *Flatland* and its spiritual successor: the videogame *Miegakure*. (Abbott 2007) In Abbott's story, there are sentient creatures who dwell in Flatland, a two-dimensional plane of existence. A Square travels to Lineland, Pointland, and Spaceland, learning how to think about three space as a two-dimensional object. While his perception of Sphere, a three-dimensional being from Spaceland, is a circle expanding and contracting, he comes to understand conceptually three space even though it is beyond his own existence. He even goes as far as to speculate about the possibility of a fourth dimension beyond Spaceland. The upshot of this work's analogy is that it is possible to conceive of and analogously understand dimensional space beyond our own existence by way of spatial analogies. Square depicts this possibility thusly:

¹⁴ It has been theorized that gases would be denser in four dimensions because (as best I can tell) of the ways in which gravitational forces act relative to dimensional axes. The gas would expand maximally within three space, only to expand "inward" along its fourth axis so that it exists spatially more condensed when measured in three dimensions. (Robbin 2008, 26)

There, before my ravished eye, a Cube moving in some altogether new direction, but strictly according to Analogy, so as to make every particle of his interior pass through a new kind of Space, with a wake of its own...And once there, shall we stay our upward course? In that blessed region of Four Dimensions, shall we linger at the threshold of the Fifth, and not therein...Then, yielding to our intellectual onset, the gates of the Six Dimension shall fly open; after that a Seventh, and then an Eighth... (Abbott 2007, 68)

They way Abbott lays out the logical framework of these analogies, starting with the dimensional condescension of a two-dimensional object and moving up the proverbial ladder through our own three-dimensional existence, suggests that we can analogously understand an infinite number of higher dimensions in the metricated terms of our own dimensional existence. Moreover, objects which occupy higher dimensions of existence could easily be perceived in and described according to lower dimensions of existence in the way that a three-dimensional object, such as a cube, can be modeled accurately in terms of two-dimensional objects. This suggests that we can model higher dimensional objects analogously in the terms of our own dimensional existence.

By way of practical illustration, the videogame *Miegakure* places the player as a three-dimensional character navigating four-dimensional worlds. The player in this game views their character from the third person perspective as a camera floating around the player character. By rotating the camera to different perspectives, the shapes of the world warp and change. It is a three-dimensional model of four space, not simply of four-dimensional objects. Where one perspective might reveal a certain shape to an object, another perspective created by rotating to a new axis makes the shape of the object appear to occupy three space differently, such that the four-dimensional objects that the player is navigating appear to shift and change within three space. This is analogous to how multiple two-dimensional models of a cube offer a clearer and fuller picture of the space it occupies. The appearance of change is analogous not only the truth of four space, but the ways in three-dimensional observers experience four-dimensional space, namely that they can only experience three of its dimensions at a time. These are not two separate realms of existence, as in the analogies of *Flatland*, but rather these spaces overlap and intersect, possibly to the extent that the total space of the third dimension is contained inside of a four space.

These two conceptual models introduce something interesting into our trans-dimensional modeling, namely the psychological experience of space. The sort of awareness of spatial discrepancy and oddness introduced by the anthropomorphizing of *A Square* and the videogame character allows us to

distinguish dimensions of spatial existence in terms of experience. On these models, three-dimensional objects experience four space differently than four-dimensional objects. Likewise, as observed in the tesseract model, three-dimensional experience of a four-dimensional object would be different than a four-dimensional experience of a four-dimensional object.

The upshot of these trans-dimensional models is that objects with higher dimensions of spatial existence can in fact occupy lower dimensions of spatial existence. When they do so, they are not reducible to that dimension, but instead can be said to transcend that dimension and exist also beyond the lower dimensions. It is therefore possible to model objects of higher dimensional existence in a limited yet truthful way which does not conceptually reduce the object to the highest dimension of the model. In this way, we might think of object *a* which has more dimensions than object *b*, such that at least one of the dimensions which *a* has and which *b* does not have are not pocket dimensions. Object *a* is therefore of higher ontological status than *b*, because it can exist in every dimensional sense that *b* can. However, *b* cannot exist in every dimensional sense that *a* can. This argument is taken up by Rosen, whose philosophical work on the topology of trans-dimensional modeling demonstrates how lower dimensions are transcended by or “nested within” higher dimensions. (Rosen 2006, 62–63) Because lower dimensions cannot fully contain objects of higher dimensional existence, it bears lower ontological status than objects transcending it. Said another way, object *a* can exist in every way that object *b* can be said to exist, but object *b* cannot be said to exist in every way object *a* can. Because we are talking specifically about dimensional modes of existence, we can talk about this in terms of ontological status so long as we qualify ontological status to mean this very minimal definition.¹⁵

Because of the dimensional relationship between space and time assumed by M-theory, it follows that an object which is of higher ontological status than the common dimension of time could in fact transcend time. This means that the given object could exist temporally (as we understand time), but could not be reduced to common temporal existence. Rather, it would seem that such an object as is capable of transcending the common dimension of time could likely exist outside of that dimension in addition to existing within it, being located both temporally and extra-temporally. Whether that existence is one of a higher temporal dimension which contains the common one or if it simply is an existence beyond all dimensions of

¹⁵ This point could be better supported if there were more space in the article to do so. In lieu of that space, I will have to rely on Rosen’s more thorough work on the subject. Let us content ourselves to say minimally that object *a* can exist in every way that *b* can, but that *b* cannot exist in every way that *a* can. This ought to be sufficient enough to make the moves I need to with this point.

time¹⁶ requires further input from theology as the object in question here is the Trinitarian God of the Christian faith. As our second and third conceptual models suggest, such an object would experience the first dimension of time differently than we do. We, likewise, would experience the temporality of such an object in odd ways which seem to contradict our sense of temporality, but would nonetheless be coherent and true.

3. Transcendent Temporality: Towards a Trans-Dimensional Model of God and Time

These trans-dimensional models demonstrate how objects with higher dimensions of existence, and thus higher ontological status (as defined minimally above), are perceived by and modeled in lower dimensions of spatial existence which they occupy. Such a relationship can be logically extended to how we think about time as a dimension. What these models show is that while objects of higher dimensional existence can occupy lower dimensions of existence, they cannot be wholly contained nor fully modeled in these lower dimensions. Rather, they transcend lower dimensions of existence, so that higher dimensional objects are able to exist in lower dimensions without being reducible to their metrication in those lower dimensions. As such, these higher dimensional objects will both experience dimensional existence in and be experienced differently by lower dimensions.

Much like how the four-dimensional tesseract occupies space both within and beyond the three-dimensional plane of spatial existence, an object or being of higher ontological status than the common dimension of time could exist temporally and exist extra-temporally in a mode of existence beyond the common time dimension. It is no great leap theologically or philosophically to assume that God is the being with the highest ontological status, and so he would be capable of transcending all known dimensions. God could be spatio-temporally present at a given spatial and temporal point while also transcending or existing outside of that point. This model of God's relationship to spacetime conforms perfectly to neither the so-called "prisoner of time" construal held by OSDT nor the atemporalist response to OSDT in the POT objection. Rather, a trans-dimensional model of God's relationship to spacetime implies that God could be both within our commonly understood

¹⁶ How one construes this depends on whether one takes seriously the possibility of extra time dimensions. If one does, then it could simply be said that God exists extra-dimensionally with respect to time. Otherwise, one could posit that God's existence beyond the temporal dimension would simply be an unmeasurable existence with respect to his experience of time. Both are possible under this trans-dimensional model.

dimension of time while being temporally extended beyond it. God could experience our time while also experiencing dimensional or non-dimensional existence beyond our time. This model, I will show, better captures the previously demonstrated motivations of divine atemporalists and OSDT. This includes the shared motivations of divine freedom and ontological responsibility as well as the unshared motivations of the creator-creature distinction, authenticity of the temporal God-world relation, and the coherency of temporal God-talk.

Transcendent Temporality and the Prisoner Objection

What would it mean for God to be transcendentally temporal with respect to what we experience as the common dimension of time? There are several implications which I will unpack here for thinking about God as ontologically higher than the common dimension of time in such a way that he transcends it. To help distinguish transcendent temporality from the OSDT and atemporalists accounts I've described, I will focus on the language of experience of time used by Greene in his speculations on how extra dimensions of time would be distinct from our common time.

The first implication is that neither divine atemporalists who proffer the POT objection nor the mere temporality proposed by OSDT adequately account for God's higher ontological status with respect to the common dimension of time. Atemporalists, hold that God cannot be temporal so as to undergo succession or change. This would mean that God cannot have any sense of existence in or experience of the common temporal dimension. God is a different kind of prisoner here, being not restricted to time, but being restricted from it. With the same breath that atemporalists accuse OSDT of not upholding divine freedom, they would themselves restrict God *from* spatio-temporality. Helm writes, "if God is in time, then he is not sovereign over time but is bound by it in precisely the same way as we are bound by it. The ever-rolling stream of time not only carries us along with it, it carries God along with it as well." (Helm 2002, 122) A transcendent model of divine temporality undercuts Helm's assumption. God can, in fact, exist in time without being bound to it. If Helm were correct about how the occupancy of the temporal dimension worked, it would stand to reason that space would work in an analogous way, so that a three-dimensional object could not occupy two dimensions of space without being restricted to two dimensions of space. This is clearly not the case, as demonstrated by our earlier example of the cube and its implications for dimensions of time.

Likewise, the restriction of God to the common dimension of time also impinges on God's freedom. On OSDT's version of sovereignty, God "cannot undo the succession that He freely brought upon Himself, nor can He retrieve His lost

moments...He cannot do anything that is logically and metaphysically impossible, and He is no less sovereign for all that." (Mullins 2014, 173) This response does avoid the prisoner objection if undoing, recurring in, or retrieving moments from succession are metaphysically impossible. However, the trans-dimensional model of time shows that this is not necessarily the case. In fact, extra spatial dimensions are presumed to function in exactly this way with regard to space, as with the example Greene gives of the ant in a compactified circular dimension of time. (Greene 2011, 204–206) It would not be impossible for a God who is transcendentally temporal to experience the succession and potential change of time differently than his creatures. In a way analogous to the apparent multiple-location of the tesseract in three space, God could appear to be simultaneously multiply located with respect to the common dimension of time. Such a view has been proposed on accounts of the Eucharist, so that the body and blood of Christ broken for the Church are present at multiple spatio-temporal locations; namely where and when churches gather to take the Lord's supper. (Pruss 2013, 60–73; Arcadi 2018, 90)¹⁷ In the same way that the hypercube appears to fold in on itself or extend internally, God could analogously appear to his creatures to experience the same moment in succession more than once. In terms of the spatial analogies unpacked in this paper, the OSDT views I have laid out do in fact restrict God to the same experience of the same dimension of time as creatures. God necessarily would experience succession in the same order and in the same way as creation does. Both OSDT and divine atemporalists, it would seem, make God a prisoner in one respect or another. Neither, according trans-dimensional models of spatio-temporality, need to do this logically or metaphysically.

The Creator–Creature Distinction in the Experience of Time

The next implication is drawn out of the creator–creature distinction which motivates atemporalist accounts of divine sovereignty and freedom. This distinction is a way of holding to the difference in ontological status between God and the created order. While both exist, and therefore have ontological status, creation exists *in the ways that it does* because God makes it so, and thus cannot be said to have exactly the same ontological status as God. God is *a se* and creation is not. Barth describes this distinction as “attesting that the reality of man and of his cosmos is not infinite [in contrast to God's reality], that it is not the One and All of reality, but that it has a genuine horizon which cannot be transcended and which cannot be

¹⁷ Both of these talk about the possibility of spatial and temporal extension as a way describing real presence of Christ in the Eucharist.

absorbed in the immanence of that reality, that this horizon...is the divine will and utterance and activity.” (Barth 2010, 87) For Barth, this is an ontological distinction between God and creation, so that the ontological dependence of creation on God implies creaturely finitude. This is different from how, for instance, human creatures craft artifacts because artifacts do not continuously rely on their human creators to exist in the dimensional ways that they do. All creatures, on the other hand, rely on God to exist in the ways that they do. In the dimensional sense of “ontological status” being used in this article, artifacts and creatures would have the same ontological status because they have the same spatio-temporal dimensional ways of existing. What distinguishes God’s ontological status from creation’s is God’s inherent lordship over creation, so that it exists in spatio-temporal ways reflective of and contingent upon God’s own nature. God’s temporality could not therefore be reduced to creaturely temporality because such a creaturely way of existing is ontologically dependent on divine temporality. While human beings do not cause the artifacts that they make to be three-dimensional versus two-dimensional, God makes all created things what they are dimensionally. While distinct, this is nonetheless done in the creator-creature relation between God and the world; Barth holds to a correspondence between the created order and God’s own being. (Barth 2010, 87, 94–95) This is precisely what is being described in the ontological responsibility for the created order, and specifically time, which OSDT and atemporalists both assert.

While atemporalists assert that God creates time, and is therefore ontologically responsible for it, OSDT claims that God creates the world in such a way that it is temporally ordered. This temporal ordering, on the OSDT account, is something essential within God’s nature, so that God orders the world temporally to reflect his own essence. Time simply is God’s own essential order imposed upon creation. This seems to conflate the creator’s and creature’s time and experience of temporality, with God and humanity experiencing the same time in the exact same way. More specifically, God’s experience of temporality on the OSDT account is, as previously stated mono-directional succession, exactly as the human creaturely experience of time. (Mullins 2014, 173–174) God cannot undo succession or retrieve past moments in the exact same way that human creatures are trapped in the successive flow of time simply because, according to these accounts, it is metaphysically impossible. If no substantial distinction can be drawn between the creaturely experience of time and the divine experience of time, then this view is in danger of reducing God’s dimensional ontological status to that of creaturely dimensional ontological status. As mentioned above, this is intimately linked with God’s lordship over the order of creation, and thus the lack of distinction might pose a challenge to God’s lordship

over time. If, as Greene argues, the only distinction we can make between the multiplicity of temporal dimensions is in the psychological experience of temporality, then we require some distinction between the creaturely and divine experience of time to avoid this collapse.

Rather than restricting God to (or from) the creaturely experience of the creature's dimension of time, it would make more sense to conceive of God's transcendence of time as distinguished from creaturely temporality in two important respects. Firstly, on the trans-dimensional model of space-time, God would not be limited to the common dimension of time experienced by creatures in the same way a cube is not limited to the two dimensions of space of a square it might occupy. This is already well captured in the literature, such as when Padgett writes, "although we are in Gods time (and thus God is in our time, too) God transcends our time. He cannot be measured by our time, and he does not have to enter into our space-time (although he is free to do so, if he wishes)." (Padgett 1989, 214–215) This is reflective of the creator-creature distinction, to which T. F. Torrance proposes, "to operate with a parallel distinction between created time and uncreated 'time', that is, between the created time of the universe defined by its contingent nature, and the uncreated 'time' (so to speak) of the eternal life of God defined by his divine nature." (Torrance 2015, 50) In this model of transcendent temporality, created time is the common dimension of time which God transcends, existing in it but not being limited to it. It is the ordered succession God's creatures' experience in which we cannot undo, recur in, or retrieve moments. Uncreated time is that internal order of God's own being in virtue of which God creates a temporally and spatially ordered world. Creaturely time, therefore, corresponds to divine time in the same way three space might be said to correspond to four space. This meshes well with the OSDT claim concerning time being an internal and necessary concomitant of God's essence according to which he orders creation temporally. However, there must be a distinction between these two temporal orders, so that we do not think of our own succession as God's. This is perhaps what OSDT is missing. God's succession must transcend ours, so that while God may indeed have succession, we do not presume that our temporal order is exactly God's temporal order. Whatever it is in his nature that our temporality reflects is ontologically distinct from created time in just the way that God is ontologically distinct from his creatures.

While Padgett's point about transcendence captures this well, it makes a fatal error. He claims that God cannot be measured temporally, either in his presence in created time nor according to his uncreated time. With respect to creaturely time, the trans-dimensional modeling implies that a lower dimension of time can in fact model and measure some aspects of higher dimensional objects present in them. If

time and space really are analogous, and if created time is truly something which corresponds to uncreated time, then God's transcendent occupancy of created time would be measurable according to whatever metrics we think possible of created time. If God does enter into our time, he does so in a way that we can analogously and truly measure according to our temporal categories with the caveat that we are neither capturing the fullness of God's temporality nor that God is experiencing created time in the same way we do.

This is the second respect in which we ought to uphold the creator-creature distinction in divine temporality. God would have a different experience of our time, not simply his own time. Similar to the way spatial dimensions interact, God's transcendent experience of created time would be measurable in our creaturely temporal or tensed terms. This means that God would have measurable succession in his life which could be described linearly. For instance, we could coherently and truly describe God's succession if we were to describe a time before Abraham in which the second person of the Trinity existed. We could then map onto our linear experience of creaturely succession, a time after Abraham wherein the second person of the Trinity takes on a human nature, introducing a change into the life of God. The succession in God's life would be coherently and truly described in these creaturely temporal terms, or tensed terms, mapping accurately onto creaturely linear succession. Another way of putting this is to say that in so far as God occupies a given point or interval of our dimensions of time, we can describe God and his actions in tensed ways with respect to our experience of succession, such as saying "God *was* with Abraham," or "God *will* answer my prayer." Yet this does not mean that God's experience of that succession or those temporal moments was exactly the same as ours, so that God experienced the succession of intervals or points in the same order. God's experience of succession could be out of linear order, or such that God experienced those two temporal points in his succession in a simultaneous way. This distinction is relative to God's temporal perspective, so that our creaturely temporal language can still map onto God's actions and occupancy of our time in a helpful and true way. Our tensed language of God, therefore, is true with respect to our experience of creaturely time. While our creaturely temporal categories cannot begin to comprehend exactly what this would mean for divine experience of succession, it nonetheless is important to note because it is in virtue of this distinct experience of the creaturely dimension of time that we can uphold God's freedom with respect to created time. While we are not free from the "ever rolling-on" of time, God in fact is in a way that does not preclude creaturely metrication of God's life, wherein we predicate our linear temporal language of God.

Possible Objections to a Transcendent Temporality

To conclude, I will anticipate two possible objections to transcendent temporality constructed on a trans-dimensional model of spacetime. The first objection would likely come from divine atemporalists. It runs like this: while it might be well to say that God transcends our dimension of time, this model implies that God does so as a being who simply exists in a higher dimension of time. God would be a prisoner of that dimension rather than our own. There are two possible ways of avoiding this objection.

The first would be to appeal to fact that God has the greatest ontological status of anything that exists. If some dimension of time is ontologically distinct from or external to God, then God is necessarily ontologically responsible for it. It must, per the model in this paper, be a dimension which God can transcend. God can transcend any dimension of time that exists externally to himself. In this way, we are left with a God who is capable of both experiencing succession and not experiencing succession. While this sounds similar to ET-simultaneity, in which God is timeless but temporally present so that every moment is simultaneous with him, it is in fact different. If one takes all dimensions of time to be external to God, then he is temporal in addition to being timeless, so that he would exist both temporally and atemporally. In other words, God would experience succession in his life, but not every aspect of his life has succession. This is contrary to ET-simultaneity in which "an eternal God cannot have succession in his life...nothing in God's life can be past or future with respect to anything else, either in God's life or in time." (Stump 2018, 19) Rather God would have succession in some aspects of his life, but not every aspect could be described in terms of temporal succession. On this reply, the freedom of God to not have succession (and thus an avoidance of the prisoner objection) is maintained in at least some aspect of God's life being able to exist beyond every dimension of time.

While one could take this tact, it appears to undercut the correlation between created temporal order and God's being. There is no temporality in God's being in virtue of which he creates a temporally ordered world. The second response to this objection would be to appeal to OSDT's defense of time as internal to God's being, thus maintaining this correspondence between divine and created time. This is helpful against the modified POT objection because time is internal to God and not something independent of him. (Mullins 2014, 172) Thus, God could not be subject to it anymore than he could be subject to himself as *a se*. Where this defense fails for OSDT on account of equating created and uncreated time (as argued above),

transcendent temporality distinguishes these by describing them as (at least) two separate dimensions of time. The distinction is maintained as well as the correlation.

The second objection I anticipate is an objection to divine time being metricated. While it is clear how we might conceive of coherently mapping creaturely temporal categories onto God's divine experience of created time, it is a greater leap to map creaturely temporal categories onto uncreated time. While I will grant that this is a great deal more confusing and that much less could be helpfully said of uncreated time in creaturely terms, the trans-dimensional model of spacetime still defends this move. Just as we are able to make three-dimensional models of four space, we can describe God's experience of uncreated time in terms of creaturely linear succession. Similar to our spatial models, we would be missing temporal information. Likely, any description we could give would be significantly abstract. Yet such temporal modeling would nevertheless be accurate in its depiction of uncreated time. This rests on the assumption that divine time is an extra temporal dimension.

While transcendent temporality does not resolve the long-standing disagreement between divine temporalists and atemporalists, it does better capture this collection of underlying theological and philosophical motivations behind OSDT and the POT objection. Transcendent temporality upholds the creator-creature distinction better than OSDT by distinguishing between uncreated and created time. It better upholds divine freedom than either OSDT or the POT objection by distinguishing God's experience of created time from our own, but in such a way that still permits for God to exist in our temporal dimension. Finally, it better upholds the authenticity of both God's relation to the spatio-temporal world and the possibility of temporal God-talk than the POT objection by granting that God could in fact exist according to our temporal dimension without being necessarily bound to it. This is done in such a way that we can authentically and coherently describe God's experience of created time in our own temporal categories while still recognizing that these are limited descriptions, and that God's experience of time is not our own.

Bibliography

- A Diagram Showing How to Make A Tesseract From a Point*, Wikimedia Commons accessed 15 July 2020 https://commons.wikimedia.org/wiki/File:Dimension_levels.svg.
- Abbott, Edwin. 2007. *Flatland: A Romance of Many Dimensions*. New York, NY: Cosimo Inc. <https://doi.org/10.1093/owc/9780199537501.001.0001>.
- Arcadi, James. 2018. *An Incarnational Model of the Eucharist*. Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/9781108588560>.

- Barth, Karl. 2010. *Church Dogmatics* III.1. Peabody, MA: Hendrickson Publishers. <https://doi.org/10.5040/9780567690494>.
- Brin, Gershom. 2001. *The Concept of Time in the Bible and the Dead Sea Scrolls*. Leiden: Brill, 2001. <https://doi.org/10.1163/9789047401179>.
- Gardner, Martin. 1966. "Mathematical Games: Is It Possible to Visualize a Four-Dimensional Figure?" *Scientific American* 214 (November): 138–143. <https://doi.org/10.1038/scientificamerican1166-138>.
- Greene, Brian. 2011. *The Elegant Universe*. New York, NY: Random House.
- Gunton, Colin E. 1991. "Trinity, Ontology, and Anthropology: Towards a Renewal of the Doctrine of the *Imago Dei*," in *Persons Divine and Human: King's College Essays in Theological Anthropology*. Eds. Christoph Schwöbel and Coline E. Gunton, 33–61. Edinburgh, UK: T&T Clark.
- Helm, Paul. 1988. *Eternal God: The Study of God Without Time*. Oxford, UK: Clarendon Press.
- Helm, Paul. 2002. "Is God Bound By Time?" In *God Under Fire: Modern Scholarship Reinvents God*. Eds. Douglas S. Huffman and Eric L. Jonshon, 119–135. Grand Rapids, MI: Zondervan.
- Horowitz, Gary T. 2005. "Spacetime in String Theory," *New Journal of Physics* 7: 1–13. <https://doi.org/10.1088/1367-2630/7/1/201>.
- Krikke, Jan. 2018. *Quantum Physics in the Age of Artificial Intelligence: Lessons Learned from China*. Bangkok, Thailand: Booksmango.
- Leftow, Brian. 2005. "Eternity and Immutability." In *The Blackwell Guide to Philosophy of Religion*. Ed. William E. Mann, 48–77. Malden, MA: Blackwell Publishing. <https://doi.org/10.1002/9780470756638.ch3>.
- Leftow, Brian. 2018. *Time and Eternity*. Ithaca, NY: Cornell University Press.
- Long, D. Stephen. 2009. "Aquinas and God's Sovereignty." In *The Sovereignty of God Debate*. Eds. George Kalantzis and D. Stephen Long, 42–60. Eugene, OR: Cascade Books. <https://doi.org/10.2307/j.ctt1cgf0rf.6>.
- Mason, Kaye, Sheelagh Carpendale, and Bryan Wyvill. 2010. "Projections in Context." *Technical Report*. Alberta, Canada: University of Calgary.
- McMahon, David. 2009. *String Theory Demystified*. New York, NY: McGraw-Hill.
- Mullins, Ryan. 2014. "Doing Hard Time: Is God the Prisoner of the Oldest Dimension?" *Journal of Analytic Theology* 2 (May): 160–185. <https://doi.org/10.12978/jat.2014-1.17-51-51122018a>.
- Padgett, Alan G. 2003. *Science of the Study of God: A Mutuality Model for Theology and Science*. Grand Rapids, MI: W. B. Eerdmans.

- Padgett, Alan G. 1989. "God and Time: Toward a New Doctrine of Divine Timeless Eternity," *Religious Studies* 75, no. 2 (June): 209–215. <https://doi.org/10.1017/S0034412500001815>.
- Pruss, Alexander R. 2013. "Omnipresence, Multilocation, the Real Presence and Time Travel." *Journal of Analytic Theology* 1: 60–73.
- Robbin, Tony. 2008. *Shadow of Reality: The Fourth Dimension in Relativity, Cubism, and Modern Thought*. Hartford, CT: Yale University Press.
- Rosen, Stephen M. 2006. *Topologies of the Flesh: A Multidimensional Exploration of the Lifeworld*. Athens, OH: Ohio University Press.
- Stump, Eleanor and Norman Kretzmann. 1981. "Eternity." *Journal of Philosophy* 78:8 (August): 429–458. <https://doi.org/10.2307/2026047>.
- Stump, Eleanor. 2018. *Atonement*. Oxford, UK: Oxford University Press. <https://doi.org/10.1093/oso/9780198813866.001.0001>.
- Torrance, Thomas F. 1997. *Space, Time and Incarnation*. Edinburgh, UK: T&T Clark.
- Torrance, Thomas F. 2005. *Theological and Natural Science*. Eugene, OR: Wipf & Stock, 2005.
- Weinandy, Thomas G. 2009. "Suffering and the Sovereign Love of God: A Conclusion to God's Sovereignty and Evangelical Theology." In *The Sovereignty of God Debate*. Eds. George Kalantzis and D. Stephen Long, 139–150. Eugene, OR: Cascade Books. <https://doi.org/10.2307/j.ctt1cgf0rf.11>.
- Weisstein, Eric W. *Tesseract*, Mathworld.wolfram.com, accessed 7 April 2020 <https://mathworld.wolfram.com/Tesseract.html>.
- Zagzebski, Linda. *The Dilemma of Freedom and Foreknowledge*. New York, NY: Oxford University Press, 1992.
- Zimmerman, Dean. 2002. "God Inside Time and Before Creation." In *God and Time: Essays on the Divine Nature*. Eds. Gregory Ganssle and David Woodruff, 75–94. Oxford, UK: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195129656.003.0005>.
- Zweibach, Barton. 2009. *A First Course in String Theory*. Cambridge, UK: Cambridge University Press.