

## LAWRENCE OSBORN

# Spacetime and Revelation

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*This paper explores two contrasting understandings of time in relation to theology and contemporary physics. The process theory (or ‘common sense’ view) of time is widely used by theologians but has certain theological limitations. A rival stasis theory of time is suggested by certain interpreters of relativity theory. The paper highlights affinities between the latter theory and classical conceptions of eternity. A concluding section suggests that a more consistent use of trinitarian theology may permit a revised form of the process theory that avoids the limitations cited earlier.*

**Key words:** time, spacetime, process, change, relativity theory, block cosmos, eternity, Trinity

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Time is a subject of profound importance and lasting fascination for physical scientists, philosophers and theologians alike. In this paper I shall restrict myself to one particular aspect of time which lies at the heart of an apparently intractable conflict among physical scientists. Is, as Prigogine and others maintain, the universe fundamentally dynamic or is it more helpful, with Hawking and many other cosmologists, to think of the universe as essentially static? In other words, does time flow or is the passage of time nothing more than an alluring myth?

The former model is often known as the process theory of time or A-series time (after McTaggart’s influential philosophical analysis of temporality<sup>1</sup>). This is essentially the ‘commonsense’ view of time held by the majority of people in western culture. It involves the familiar demarcation of time into past and future seen from the vantage point of a moving present. Its key features are the priority of the present and the reality of temporal passage.

In sharp contrast to this commonsense view stands the stasis theory of time (or, following McTaggart, B-series time). According to this approach, time is best regarded as analogous to space. Together with the three spatial dimensions, it constitutes one dimension of a four dimensional continuum. The key distinguishing feature of this theory is that no subspace is ontologically privileged: all points on the spacetime continuum are equally real. Thus temporal passage is a myth and the present has no objective reality. One well-known advocate of this approach describes it in the following terms: ‘The objective world simply is. It does not happen.

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1 J. McT. E. McTaggart, *The Nature of Existence, Volume 2*, Cambridge: Cambridge University Press (1968).

Only to the gaze of my consciousness crawling upward along the lifeline of my body does a section of this world come to life as a fleeting image<sup>2</sup>.

Process or stasis? The spacetime continuum of classical relativity theory or the dynamism of human temporal experience? The continuing debate between these two very different approaches has wide-reaching implications for many other academic disciplines. For example, the anthropologist Alfred Gell comments that ‘the A-series/B-series distinction is not only of parochial philosophical interest, but can be seen to have ramifications extending throughout the human sciences, including under that heading economics, sociology, psychology, geography, etc. as well as anthropology’<sup>3</sup>. He even goes so far as to describe the conflict between the stasis and process theories as a fundamental fault-line in the geology of knowledge. Given their very different assessments of what constitutes reality, the two theories will give rise to very different theologies of creation. And to some extent, the fault-line is one which divides theology from the physical sciences with many theologians opting for a commonsense view of time while influential sections of the physics community argue for the stasis theory.

### **Revelation and the Moving ‘Now’**

The natural starting point for Christian theology (at least its more orthodox expressions) is the Bible. Broadly speaking, both Testaments share a commonsense outlook on time. Granted the inevitable differences in cultural expression, the biblical authors nevertheless betray an experience of time that is recognizably similar to our own. More significantly, that commonsense interpretation of human temporal experience is simply accepted as the basis for their account of God’s revelatory activity. Thus history is laid out before them as the arena of divine activity—the fulfilment of past divine promises is the ground for trusting that God will continue to fulfil his promises in the future that is creeping up from behind. So the threefold division of time into past, future and a moving present that is characteristic of the process theory is simply taken for granted by the biblical authors. Furthermore, particular attention is paid to the present as the locus of our personal encounter with God<sup>4</sup>.

Can we therefore take it that theology should adopt a process view of time? I have to say that I think we cannot, at least not without further discussion. The problem is that the biblical books were not written as metaphysical texts. Their purpose is practical rather than speculative. As James Barr has shown very convincingly, the biblical authors, while taking for granted an unreflective process view, simply do not provide us with the

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<sup>2</sup> H. Weyl, *Philosophy of Mathematics and Natural Science*, Princeton, NJ: Princeton University Press (1949), p. 166.

<sup>3</sup> A. Gell, *The Anthropology of Time: Cultural constructions of temporal maps and images*, Oxford: Berg (1992), p. 154.

<sup>4</sup> Following H. W. Wolff, *Anthropology of the Old Testament*, London: SCM (1974), chapter 10.

data necessary for the construction of a biblical theory of time or, indeed, of God's relation to time<sup>5</sup>. Thus, while the biblical authors work with a process view of time, this does not rule out the possibility that there may be pressing theological reasons for preferring a stasis theory. There may also be logical reasons for such a conclusion, e.g. if it could be shown, as McTaggart attempted to show, that the process theory is logically incoherent.

Nevertheless, the tendency among Christian theologians in the modern era, both ancient and modern, has been to adopt a more or less common-sense view of created time. Emil Brunner is typical when he comments that

Everyone knows that time passes away. Everyone knows that the moment which was just now and is now gone never more returns. What men of all times and countries have been conscious of as the painful experience of time is the unceasing flow of the time stream, transience, the irreversibility and inexorability of this movement from the 'not yet' to the 'now' and onwards to the 'no longer'. . . . The flow of time is inseparably bound up with transience, mortality, the not lingering, the not being able to return to what has once been, and just that constitutes the linearity of time.<sup>6</sup>

Or consider Augustine's seminal meditation on time in *The Confessions*. Having admitted the difficulties inherent in any positive description of time, he continues

All the same I can confidently say that I know that if nothing passed, there would be no past time; if nothing were going to happen, there would be no future time; and if nothing *were*, there would be no present time.

Of these three divisions of time, then, how can two, the past and the future, *be*, when the past no longer is and the future is not yet? As for the present, if it were always present and never moved on to become the past, it would not be time but eternity. If, therefore, the present is time only by reason of the fact that it moves on to become the past, how can we say that even the present *is*, when the reason why it *is* is that it is *not to be*? In other words, we cannot rightly say that time *is*, except by reason of its impending state of *not being*.<sup>7</sup>

Past events no longer exist. They impinge upon the present only insofar as they reside in memory. Conversely, future events do not yet exist and interact with the present only insofar as they are anticipated or hoped for. Only present events are real (thus the present is invested with ontological priority over past and future) and they hover on the brink of non-being. No, they do not hover, they fling themselves only too soon over the brink.

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5 J. Barr, *Biblical Words for Time*, London: SCM (revised edition, 1969).

6 E. Brunner, *Eternal Hope*, London: Lutterworth Press (1954), 43.

7 Augustine *The Confessions*, translated by R. S. Pine-Coffin, Harmondsworth: Penguin (1961), II.14.

Augustine's meditation continues into disturbing territory. If only the present exists, what is the 'depth' of the present? We can talk about this year; but ten months have already passed away and one is not yet. Or we can talk about this month, but it too is divisible into past and future components. And we can go on indefinitely, looking at smaller and smaller durations and dividing them in the same way. The consequence of such an analysis is a view of the present as an instant—a durationless boundary between past and future. What price reality, if events are real only at such a vanishingly thin boundary?

We can perhaps draw back from this conclusion and insist that the present has a certain depth. A move of this kind is made, for example, in Husserl's discussion of internal time-consciousness or in William James's notion of the specious present. Or in Pierre Bourdieu's anthropological analysis of time experience. Thus 'The "present" of existence is not confined to the mere instantaneous present, because consciousness holds united in a single look aspects of the world already perceived and on the point of being perceived'<sup>8</sup>. While this sounds like Husserl, Bourdieu's notion of 'on the point of being perceived' is far more flexible than Husserl's concept of protention—so much so that events several months in the future may be incorporated into the present. In her sociological analysis of time in postmodern society<sup>9</sup>, Helga Nowotny develops a similar notion of an extended present which she argues is supplanting modernity's obsession with the future. In all these cases, reality is ascribed to those things and events that can be located in a period of shorter or longer duration focussed upon the present moment.

Attractive as this approach may be, it possesses certain theological dangers. In particular, such a model of time encourages its advocates to make the present (of whatever depth) bear the entire weight of Christian concern. Only the present matters because only the present exists. But this is to transform the pastoral good sense of Jesus' 'Be not anxious about tomorrow' into metaphysical nonsense. In fact, it takes us well down the road to a Christian existentialism in which the present is our exclusive point of contact with God. The past is no more and the historical dimension of the Christian revelation becomes an irrelevance. In such a scenario, questions about whether Jesus did, in fact, rise from the dead are displaced by a concern for a contemporary encounter with the risen Lord. Similarly the focal point of Christian hope will be displaced and the promise of post mortem existence in communion with God will be reinterpreted in terms of life now. Again, this temporal solipsism<sup>10</sup> has the potential to force a reworking of ecclesiology with concepts such as catholicity and ecumenism being defined exclusively in relation to the contemporary church so

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8 Bourdieu cited by Gell *op.cit.*, p. 288.

9 H. Nowotny, *Time: The Modern and Postmodern Experience*, Cambridge: Polity Press (1994).

10 To use a term coined by Dr Alan Torrance of King's College London in an unpublished paper.

that what matters is a purely synchronic unity rather than the diachronic unity of standing within a historical tradition.

### **Physics and a Block Cosmos**

What of the alternative? The view that the same ontological status should be ascribed to events at all points on the spacetime continuum is common among contemporary physicists (particularly those engaged in theoretical cosmology). This has been the case since Minkowski's brilliant reinterpretation of Einstein's special theory of relativity appeared in 1908. While Minkowski himself did not unequivocally accept a stasis theory of time, it rapidly became the conventional wisdom among physicists working in the area.

Even Einstein, who in the 1920s expressed reservations about this aspect of spacetime physics<sup>11</sup>, came to endorse it, at least implicitly. Thus in a letter expressing sympathy for the death of a lifelong friend he writes 'Michele has left this strange world just before me. This is of no importance. For us convinced physicists the distinction between past, present and future is an illusion, although a persistent one'<sup>12</sup>. Death has no real significance because we can say that Michele exists timelessly between points A and B in the spacetime continuum. We may regret that our location in spacetime prevents our continuing interaction with him, but he is no less real than when we were located at a point which permitted interaction. The analogy with space is very strong: just as I believe that Cambridge has a continuing existence even when I am not there to see it, so Michele exists between those points in spacetime even though I have no access to them.

An early, and very explicit, statement of this view is to be found in the work of E Cunningham:

With Minkowski space and time became particular aspects of a single four-dimensional concept; the distinction between them as separate modes of correlating and ordering phenomena is lost, and the motion of a point in time is represented as a *stationary curve in four-dimensional space*. Now if all motional phenomena are looked at from this point of view they become *timeless phenomena in four-dimensional space*. The whole history of a physical system is laid out as a *changeless whole*.<sup>13</sup>

Again we have this very strong assertion of belief in the real coexistence of all spacetime points with the implication that notions such as

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11 See, for example, Einstein's endorsement of Emile Meyerson's concerns about the apparent spatialization of time in relativity theory—in M. Capek, (ed) *The Concepts of Space and Time*, Dordrecht: Reidel (1976), p. 366f.

12 Einstein cited by I. Prigogine & I. Stengers, *Order Out of Chaos: Man's New Dialogue With Nature*, London: Heinemann (1984), p. 294.

13 cited by M. Capek, 'Time in Relativity Theory: Arguments for a Philosophy of Becoming', in J. T. Fraser (ed), *The Voices of Time: A cooperative survey of man's views of time as expressed by the sciences and by the humanities*, New York: George Braziller (1966), 434–54 (p. 434).

present and the passage of time are merely subjective. Thus Paul Davies could write

In the absence of an acceptable theory of the mind in physics, any discussion of physical time must necessarily exclude consideration of the now, and the apparent forward flow of time, because these are meaningless concepts within the context of ordinary space-time as it is at present understood.<sup>14</sup>

Advocates of this view may, with Davies, admit that there is an asymmetry with respect to the time axis that is not matched by the other spacetime axes. However, they would deny any fundamental significance to this asymmetry, citing in their defence the time symmetry of most simple physical systems.

A more philosophical justification of the stasis theory would take its inspiration from McTaggart's attempt to deny the reality of time. According to McTaggart, the process theory of time is logically incoherent since it requires every event to possess the incompatible attributes of being past, present, and future. If we counter by arguing that these attributes are not possessed in the same way by every event, McTaggart's response would be to demonstrate that he can set up an infinite regress of contradictory and non-contradictory statements. This is an argument that has been developed and refined by Hugh Mellor<sup>15</sup>.

The stasis theory is further reinforced by certain interpretations of quantum cosmology. In particular, Hawking's invocation of imaginary time has the effect of suppressing the difference in sign between the space and time components of the metric for spacetime. As a consequence, one of the most striking disanalogies between space and time is wiped out at a stroke.

### **Static Time and the Eternal 'Now'**

In spite of this very strong endorsement from certain physicists, the stasis theory of time is metaphysical rather than physical in character. It cannot simply be read unequivocally from the equations of special or general relativity. Rather it is a specific interpretation of those theories. As Peter Kroes has argued at some length, the theories of relativity do not require us to dismiss the moving 'now' and the flow of time as entirely subjective<sup>16</sup>. Rather, the relativity of simultaneity contradicts the *universality* of these aspects of time. All that relativity theory requires us to say is that the moving 'now' and temporal passage are local features of the physical world—a point that is made rather clearly by the famous twins' paradox.

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14 P. C. W. Davies, *The Physics of Time Asymmetry*, Leighton Buzzard: Surrey University Press (1974), p. 3. To be fair to Davies, this is a view that he would no longer endorse. See, for example, his recent *About Time: Einstein's Unfinished Revolution*, Harmondsworth: Viking (1995).

15 D. H. Mellor, *Real Time*, Cambridge: Cambridge University Press (1981).

16 P. Kroes, *Time: Its Structure and Role in Physical Theories*, Dordrecht: Reidel (1985).

In spite of its blatant contradiction of common sense, the stasis theory of time exerts a powerful attraction. But why should this be so? Einstein's endorsement of the stasis theory cited above points to one possible answer. It provides at least a partial response to our fear of cessation and death. According to the stasis theory, things do not cease to exist they merely recede beyond our temporal horizon. What now is for us is a matter of perspective rather than ontology. In other words, the stasis theory is imbued with religious potential. This potential becomes clearer as we explore the relationship between time and certain understandings of eternity. Specifically, if we follow the classical tradition of treating God as an immutable and eternal divine substance, a coherent answer to how such a being can be related to events and things in time is most easily achieved by adopting a stasis theory.

One popular contemporary interpretation of eternity suggests that eternity is an atemporal duration<sup>17</sup>. But what can this possibly mean? Is it not merely a contradiction in terms?<sup>18</sup> The intention of this model is to convey that God's being is extensive but that this extension is not temporally (or spatially) divisible. But how is such a God related to time? Stump and Kretzmann suggest that God may be atemporally simultaneous with things and events in time. But how can God be atemporally simultaneous with events in 1954, 1996 and 2024? The problem seems intractable if a process theory of time is used. However, if, as the stasis theory suggests, these events timelessly coexist, there is no such problem<sup>19</sup>.

An alternative model of eternity often associated with a process theory of time<sup>20</sup> is that of a tenseless duration: eternity is a timelike duration in which tenseless succession takes place. In other words, the divine life involves the relations 'earlier' and 'later', and yet nothing in the divine life 'passes away' or is 'yet to come'—the stasis theory of time has, in effect, been taken over as a model for eternity. However, its association with a process theory of time is questionable. Consider events E1 occurring in the year 1500 AD (i.e. from my perspective a past event), E2 occurring as I write this sentence (present) and E3 occurring in the year 2100 AD. From the tenseless vantage point of eternity, God knows all these events and is simultaneous with all these events. Since we are assuming that eternity is a tenseless duration, God cannot know these events as past, present or future. Otherwise, God could use this knowledge to set up corresponding tensed relations between events within the life of God: tenseless duration would collapse into an everlasting tensed duration. If God knows these events from the vantage point of a tenseless duration, he knows them as 'now' existing simultaneously with God. Further, he knows their mutual

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17 E. Stump & N. Kretzmann, 'Eternity', *JPhil* 77 (1981), 429–58.

18 This is the substance of Paul Fitzgerald's critique of the Stump-Kretzmann view: P. Fitzgerald, 'Stump and Kretzmann on Time and Eternity', *JPhil* 82 (1985), 260–69.

19 For a more detailed treatment, see A. Padgett, *God, Eternity and the Nature of Time*, London: Macmillan (1992), 72–74.

20 E.g., Q. Smith & L. N. Oaklander, *Time, Change and Freedom: An introduction to metaphysics*, London: Routledge (1995), 46f.

temporal relations as relations of earlier and later. If God knows events in this tenseless way, then this is the reality rather than our tensed understanding of events. Thus, a tenseless duration view of eternity demands a stasis theory of physical time. Compare Boethius' own view of the matter:

Embracing the infinite lengths of past and future, it [God's knowledge] considers everything as if it were going on now in a simple mode of awareness. So, if you want to weigh the presentness with which he discerns everything, you will more rightly judge it to be not a foreknowledge as of the future, but the knowledge of a never failing instant. Hence it is called pro-vidence rather than pre-vision, because it looks forth from a position far removed from things below as if from the highest summit of things.<sup>21</sup>

The image is that of someone standing on the summit of a high mountain viewing the surrounding countryside all laid out equally below. This spatial analogy strongly suggests that events which from our limited vantage point on the plain of temporality appear past, present or future are in reality (i.e. from God's perspective) all equally real.

A third possible interpretation of eternity is the absolute divine timelessness entertained by much classical philosophical theology. This is eternity as the negation of temporality: a point-like existence without succession or duration. How can an absolutely timeless deity be related to a temporal world? If God is timeless in this absolute sense, then he must timelessly create and sustain the universe, with its temporal order. The following argument suggests that only a stasis theory of time is consistent with such a view of divine sustenance<sup>22</sup>. God's active sustenance of any episode of the universe entails the existence of that episode. Now consider an episode E of the universe that exists only at time T. If the process theory is true, God can act to sustain E only at T. In other words, God cannot be absolutely timeless. On the other hand, if God timelessly acts to sustain E at T, then it is timelessly true that E exists at T. But this requires us to abandon process theories of time in favour of a stasis theory.

One theological advantage that might flow from adopting such a model of time is its capacity to undermine any tendency to identify creation with the first moment of time. More consistent with a stasis view of time would be an understanding of creation as the creation of the spacetime continuum and all its contents in their entirety. Every moment of creation is thus immediately related to the divine creative activity. Such immediacy may act as a salutary reminder of the intimate relationship between incarnation and creation. In particular, it excludes the possibility of a theology of the first article—the kind of overemphasis on creation at the expense of christology that left German theology vulnerable to Nazi ideology.

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21 Cited by R. Sorabji, *Time, Creation and the Continuum: theories in antiquity and the early middle ages*, London: Duckworth (1983), 256.

22 For more detail, see Padgett 1992, 74–76.

However, the main theological advantage of the stasis theory is for theologians and philosophers nurtured in the classical tradition. As already indicated, the stasis theory holds a particular attraction, since it allows them to reconcile a timeless and immutable deity with a temporal creation. It denies the ravages of time and holds out hope of a redemption from our temporal limitations.

Nevertheless, this quest for a timeless redemption has certain undesirable consequences for a faith based upon incarnation. Chief among these is the implicit denial that God can be present to his creatures<sup>23</sup>. True, they are all present to him but, as the passage from Boethius cited earlier points out, he 'looks forth from a position far removed from things below as if from the highest summit of things.' The result is a God who cannot be genuinely involved in the temporal. Thus, as Dietrich Ritschl and more recently Colin Gunton have pointed out, the incarnation becomes in the Augustinian tradition, 'a timeless presence inserted into time rather than a genuine economic action.'<sup>24</sup>

A further cost of this model is its effective dismissal of our entire experience of time as nothing more than a function of human psychology. Physical and spiritual reality are not to be ascribed to the point of light that is the human consciousness scanning through the spacetime continuum. Rather what is real is the continuum in its entirety together with, in the more explicitly Christian readings of this model, the entire spiritual continuum. And these are timelessly real—not merely tenselessly real, as some advocates of the stasis theory would have it—but timelessly real. This implies that the outcomes of all our decisions are timelessly decided. The time, place and manner of my dying is timelessly decided. What will be, will be—indeed, already is (timelessly). In other words, the implications of the stasis theory are strongly deterministic<sup>25</sup>. In keeping with this strong determinism, free will is reducible to human ignorance.

An even more disturbing implication of a Christian reading of the stasis theory, at least for scientists, may be what it appears to do to efficient causality. It suggests that this universe is the direct creation of God in the sense that every point on the spacetime continuum is timelessly created by God. If so, efficient causality may be reduced to a mere epiphenomenon of the internal consistency of God's creative activity.

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23 O. Weber, *Foundations of Dogmatics: Volume 1*, Grand Rapids, Mich: Eerdmans (1981), 455.

24 C. E. Gunton, *The One, The Three and The Many: God, Creation and the Culture of Modernity. The Bampton Lectures 1992*, Cambridge University Press (1993), 84.

25 Ironically, Boethius defended divine timelessness on the grounds that it alone could preserve creaturely freedom. If God is immutable, he must also be infallible—no creaturely action can change his knowledge of creation. Now, if this knowledge were foreknowledge, the result would be determinism. However, argues Boethius, if someone sees your action, but not in advance, your freedom is not restricted in any way. And God views creation in just this way, embracing its entire history in his eternal present.

There are affinities between this timeless creation of the entire spacetime continuum and Karl Heim's reinterpretation of the divine preservation of the world as continuous origination. Heim describes duration in the following terms,

the duration of a thing which has remained almost unchanged through years or centuries, or millions of years, is . . . not a static being which exists in itself, but a continuous series of successive acts of preservation, by which from moment to moment it is decided afresh that this thing shall retain this particular form.

Thus all maintenance is a continuous re-creation.<sup>26</sup>

Heim presents the history of creation as a series of divine acts of creation. Replace that temporal series with a timeless series and you have the timeless creation of the entire spacetime continuum. In both models, temporal succession is a mere illusion. The reality is a series of divinely ordained static moments of creation, there can be no genuine activity on the part of the creature but only the illusion thereof.

Thus, in spite of its affinities with a common interpretation of eternity, I think there are pressing theological reasons for rejecting a stasis theory of time.

### **Process Time and Theology**

Does this condemn us to a probably futile rearguard action against the dominance of the stasis theory in the physical sciences? No. As I have already suggested, the claims of the stasis theory to be the only reasonable interpretation of relativity theory are overrated (particularly by the popularizers of science).

Much of its persuasive power lies in the assumption that time is analogous to space. Relativity theory clearly indicates the interdependence of space and time. But interdependence is not the same as identity and there are a number of powerful disanalogies which should make us question whether the tendency to view time in spatial terms is not to a large extent an artefact of our need to use spatial metaphors in order to measure and picture temporality.

Most of the macroscopic behaviour of the natural world points to a disanalogy. By and large, the biological and human sciences take for granted a process theory of time. Is evolution reducible to a mere asymmetry in one of four spatial dimensions? Is the apparent dynamism of the living world merely an artefact of human consciousness as it brings to life successive scenarios in the spacetime continuum?

The asymmetry itself is an important disanalogy between space and time. Spatial symmetry is taken for granted. But, in the real world, temporal symmetry is almost nonexistent. It pertains only to a narrow

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26 K. Heim, *God Transcendent: Foundation for a Christian Metaphysic*, London: Oliver & Boyd (1935), p. 182.

class of very simple, idealized physical situations. The impression that the physical world is time symmetric is largely a product of the fact that it was precisely the simple time symmetric situations which were most amenable to mathematical representation and therefore formed the basis for the physical sciences.

Thus purely physical considerations do not rule out the continued theological use of a process theory of time. On the other hand, it is apparent that theologians have tended to be inconsistent in their views of time. They have happily accepted a process theory of time insofar as it relates to creaturely existence. However, this has gone hand in hand with various theories of eternity which, for consistency, would require their advocates to maintain not a process but a stasis theory of time. Clearly there is considerable scope for further theological work on the nature of time.

As I have already noted, the Bible provides us with little explicit material from which to develop a theology of time. Thus it is hardly surprising that, in spite of the prominence given to history in the Bible, classical Christian theology adopted the generally negative view of time that dominated the late Hellenistic world. As a result Christianity has tended to overlook the sheer dynamism of God. The living God attested to in Scripture is frozen by much Christian theology into the static denizen of a timeless eternity.

By contrast, the biblical doctrine of the incarnation points to a God who participates in the temporal process; who can, therefore, participate in temporal processes—a God whose activity is describable in temporal terms. Not only is the activity of God describable in temporal terms but the being of God is identifiable in narrative form. Indeed, it is the basis of the distinctive Christian doctrine of God that he is identifiable three times over in narrative form: three stories (Exodus, Resurrection, Pentecost); three identities; one God. It is not merely the divine activity that is thus identified but God himself. The divine Persons receive their unique identity from their place in the story of God. Thus they are ordered in a way which, if we were speaking of creatures, we would describe as temporal ordering.

The divine economy, the active involvement of God in time and space, implies that God cannot be timelessly (or spacelessly) eternal in a negative, privative sense. This is reflected in Trinitarian theology by the concept of perichoresis<sup>27</sup>. The term denotes a making of space. Each of the Persons of the Trinity actively makes space for the others. Each is the active context or matrix of the others. Thus it speaks of the inter-animation of the divine Persons. Each Person is given life as personal being through relationship with the others; through participation in the life of the others.

Corresponding to this divine spatiality, we may speak of a divine temporality constituted by the inter-relations of the Persons. The language

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<sup>27</sup> See Gunton 1993, 163–73.

of Trinitarian theology is inescapably temporal in nature and it reinforces the intuition that personal reality and temporal language are interdependent. In God we have three stories interwoven into one. Far from seeing God as atemporal, Trinitarian theology suggests that God is the wellspring of temporality; there is that in the life of God to which our created temporality bears an analogical relationship. The concept of perichoresis may then be used analogically to illuminate the created order. If perichoresis accurately describes the God who is revealed in three interdependent ways in the Christian Scriptures, it speaks of personal dynamic interrelatedness as the very heart of reality.

A Trinitarian ontology suggests that temporality is primarily a function of interpersonal relations. If you like, time is what happens between persons. Time is the environment of personal being. As the poet Philip Larkin put it, 'Where can we live but days?'<sup>28</sup> Augustine first suggested a correlation between time and personhood with his presentation of our experience of temporality as a distension of the soul. And this theme recurs in western philosophy, from Augustine to Kant, to Heidegger and Derrida. Genevieve Lloyd summarises the tradition by saying that, 'we cannot think consciousness without thinking time, or time without thinking consciousness . . . if we take away the thought of consciousness, time also vanishes'<sup>29</sup>.

In one important respect, however, a Trinitarian temporality differs from these so-called subjective models of time. Whether we are dealing with Augustine's distension of the soul or Whitehead's process of concrescence, the latter are mostly solipsistic. By contrast Trinitarian temporality is inherently social. I have time by virtue of the other. I receive time as a gift through my relationships with others. Thus it is tempting to suggest that time is imposed on an essentially atemporal cosmos by personal beings as they relate to each other and their impersonal environment. This would indeed be the social analogue of many subjective theories of time which effectively imply that time is an illusion created by consciousness. It would be to make time a collective illusion, a dis-ease of personal being.

However, I do not think this can be the case if, as Trinitarian theology suggests, ultimate reality is both personal and temporal. If, further, personal being is an end (not necessarily the ultimate goal) of the created order, then the created order must be such that the emergence of personal (and, therefore, temporal) reality is a possibility. In other words, the created order must be such as to admit the possibility of temporality. We live in a world with a capacity for time. This is connected with the distinctively Christian understanding of creation. According to Christian theology, creation is not merely a deistic positing of an external independ-

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28 cited by K. Ware, 'Time: Prison or Path to Freedom?' in *Wide as God's Love* edited by J. Osborn & Sr Christine SLG, London: New City (1994), 108–19 (109).

29 G. Lloyd, *Being in Time: Selves and narrators in philosophy and literature*, London: Routledge (1993), 2.

ent reality. Rather it is an act of divine self-commitment to the other. God creates by addressing the other and, in so doing, brings the other into relationship with himself. The capacity of creation for temporal relations flows from that primordial act of relating to the other. Thus there is a created temporality which enables creatures to relate to one another and to God.

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