God and the World of Signs: Semiotics and Theology

with Andrew Robinson and Christopher Southgate, "Introduction to Part 2"; Andrew Robinson and Christopher Southgate, "Semiotics as a Metaphysical Framework for Christian Theology"; F. LeRon Shults, "Transforming Theological Symbols"; Andrew Robinson and Christopher Southgate, "Broken Symbols? Response to F. LeRon Shults"; Jeremy T. Law, "Toward a Theology of Boundary"; Philip Clayton, "Critical Afterword"

TOWARD A THEOLOGY OF BOUNDARY

by Jeremy T. Law

Abstract.   Awareness of boundary, both physical and mental, is seen as the beginning of perception. In any account of the world, therefore, boundary must be a ubiquitous component. In sharp contrast, accounts of God within the Christian tradition commonly have proceeded by the affirmation that God is above and beyond boundary as infinite, timeless, and simple. To overcome this "problem of transcendence," of how such a God can relate to such a world, an eight-term grammar of boundary is developed to demonstrate how God as Trinity can properly be held to be without boundary yet constitute the ground of a bounded world. This leads to a way of granting theological significance to the origin and development of life. Life is seen to exist in dynamic, intentional relationships between context ("outside") and intext ("inside") across permeable boundaries through which an exchange of resources and information takes place for the sake of self-continuation. Comprehending life's distinctive utilization of boundary in terms of the grammar developed here enables life to be seen not only as a vestige of the Trinity but also, precisely because of this, as a sign and parable of redemption.

Keywords: autocell; boundary; Cappadocian Fathers; evolution; interpretation; origin of life; perichoresis; problem of transcendence; redemption; semiotics; *telos*; Trinity

Jeremy T. Law is Dean of Chapel, Canterbury Christ Church University, North Holmes Road, Canterbury, Kent, CT1 1QU, U.K.; e-mail jeremy.law@canterbury.ac.uk.

www.zygonjournal.org

It could be argued that awareness of boundary is the beginning of perception. All thought and all definition demand the construction of a notion of boundary rooted in an awareness of where one thing is distinguishable from another. Without boundary nothing is thinkable because all is undifferentiated. Without boundary there could be no categories, no relationships, no patterns. Music would not exist without the boundaries that distinguish rhythm, pitch, and tonality. Without boundary nothing could be said, for words and grammar are dependent on boundary even as they seek to describe and comprehend boundary. Boundary is difference, and difference is an irreducible ground of meaning. Without the recognition of difference, the process of interpretation cannot even begin.

If even the possibility of thinking and speaking about the world that we know is embedded in the perception of boundary, it is a curiosity that, within Christian tradition, language about the God who is held to be the ground of this world commonly has been framed by the relentless eschewal of boundary. In what has come to be known as classical theism, the axis of thought linking Augustine of Hippo in the fifth century to Thomas Aquinas in the thirteenth—which still projects a constraining line into the present— God is defined as the inverse of worldly experience: God is what the world is not. God is *infinite*, without limit. God is *eternal*, without temporal beginning or end, and without any sense of successiveness. All is simultaneous unity.[1] God is *omnipresent*, without spatial boundary. God is *omniscient*, without limit to knowledge of knowable things. God is *immutable*, because in change there is the inevitable "before" and "after," and the inescapable "for better" or "for worse." God is *self-existing* (the doctrine of God's aseity), dependent on nothing but God's self. And God is *simple*, not composed of any parts which would inevitably invoke boundaries.

Creation, it seems, is irreducibly defined by boundaries and God by limitlessness. How then could such a God relate to this bounded world that God so utterly transcends? Indeed, how could such a God come to create a world that is temporal when God's eternity is defined as the very inverse of time?[2] More generally, how could creation be any more than arbitrarily related to God's being when there seems no possibility that it could reflect, however tentatively, the nature of its creator?

The problem described here is not new. It is the classic "problem of transcendence" that lay at the heart of the Platonic-Pythagorean understanding of reality (Young 1983, 18). It is the quandary of the One and the many. It is the question of the relationship between the manifold variety of life as experienced and the transcendent ground required to secure its existence. Early Christian reflection sought a solution by following the line of Middle and then Neo-Platonism. Plotinus (c. 204–270 C.E.), the key exponent of the latter, is instructive here.[3] The totally transcendent One, beyond all categories of being or distinction, is that upon which all things exist by reason of a process of necessary emanation (conceived after the

manner of light radiating from a source). Such emanation, by which the One is neither diminished nor affected, produces a continuous hierarchy of being starting with *Nous* (mind or thought, which mediates between the One and the multitude of the Ideas or Forms), passing through the World-Soul (which mediates between the Nous and the sensual world), human souls (which participate in the realms of *Nous* and body [matter]), and finally matter itself. The connection between the One and the many is made via a hierarchy that seamlessly links divine being with material reality through a series of intermediaries.

One option open to Christian thought was to lay out its language of God as Father, Son (Logos) and Spirit according to just such a hierarchical pattern of being. Origen (c. 185–c. 254 C.E.) is generally taken as a classic exponent of this option.[4] A later follower, Eusebius of Caesarea (c. 260–c. 340 C.E.), thus could equate God with the One, and the Logos with both the One and the many: with the One by virtue of the Logos's status as image of God, and with the many by virtue of the Logos as the instrument of creation's existence (Young 1983, 18). However, as Robert W. Jenson (1984, 124) points out, this schema was inherently unstable in face of the radical distinction between God and creation that Christianity inherited from Judaism.[5] Either Jesus the Son has to be ejected from the category of divinity, as with Arius (c. 250–c.336 C.E.), to be but the highest of all creatures, or, as was concluded over against Arius and his followers at the Council of Nicaea (325 C.E.), the Son must be held to be *homoousios*, of one substance, with the Father.[6] Taking this step, however, means that the problem of transcendence has to be overcome via a method other than that of a hierarchy of being, a point not lost on Eusebius, who remained suspicious of the term *homoousios* for this reason.

It is only when we come to the pioneering trinitarian thought of the so-called Cappadocian Fathers,[7] toward the end of the fourth century, that the shape of this emerging alternative finally becomes clear. Once the Holy Spirit's equal status with the Father and the Son had been forcefully implied by Basil the Great (as presented in his *On the Holy Spirit* [Basil 1980]) and unambiguously championed by Gregory of Nazianzus,[8] the way lay open for a definitively trinitarian approach. The relationship between the One and the many, of unity and distinction, lies not beyond and outside the being of God but within God. It lies within the trinitarian being of the *one* God who subsists as the *distinct* Persons of Father, Son, and Holy Spirit, coequal, coeternal, and consubstantial.

Accordingly, I contend, there is a meaningful way of relating God to a creation characterized by boundary that escapes the trammel of classical theism, which turns out to be insufficiently trinitarian. In examining the possible theological significance of the emergence and evolution of life, which is the burden of this essay, I demonstrate in what sense creation can be understood as having been unfolded from the being of God. In doing

so I hope to avoid compromising the irreducible otherness of God and creation. What I intend here is an apologetic natural theology of a particular sort: an unfolding of the purpose and meaning of creation from the perspective of the self-revelation of God as Trinity.

THINKING ABOUT BOUNDARIES

I aim here to set up a basic vocabulary of terms concerning boundaries, physical and mental, that, once sufficiently nuanced, can be used of both the trinitarian being of God and the created world in such a way as to demonstrate:

- a degree of continuity between God and creation such as to engender a sense that creation exists as the unfolding of possibilities immanently realized in the life of the Trinity;

- a sufficient degree of discontinuity between God and creation so as to protect God's irreducible otherness and uniqueness, because only so can God be the source of creation's redemption;

- that the redemption of creation can be conceived as the transformation of creation through its participation in the trinitarian life of God;

- that the evolution of life, from its simplest form to the emergence of self-conscious mind, may be seen, in a suitably qualified way, as a set of parables and hints concerning the form of its promised redemption.

My aim is not meticulous philosophical precision—that I leave to others —but rather the establishment of a way of conceiving boundaries that is of heuristic value. I offer a vocabulary of eight terms applicable to any perceived boundary. They also could be seen as eight sorts of apposite question. In offering these terms I am assuming their equal relevance to both physical and mental (conceptual) boundaries. This is not least because to have perceived a boundary in the first place, be it physical or not, is to have created a mental construct. Mental and physical boundaries at the very least therefore must be analogies of one another. Moreover, if these terms are to be used both of the created order and in some sense of God, they will need to be capable of extension to the nonmaterial. For the sake of assisting their introduction, however, it may be helpful to have in mind a material object. The proposed key terms are:

1. *boundary:* that which distinguishes something from something else. Boundaries can be sharp and clear or fuzzy gradations (and at the quantum level probabilistic), but they are essentially about continuity (this is still the same something) and differentiation (this is no longer the same something);

2. *specific*: an identifiable primary object of study that is distinguished by a boundary;

3. *context:* the constituents and their structural ordering of that which lies beyond the boundary of a specific, so creating a notion of "outside";

4. *intext*[9]: the constituents and their structural ordering of that which lies within the boundary of a specific, so creating a notion of "inside";

5. *permeability*[10]: the possibility, and its extent, of interchange between intext and context across a boundary. This interchange may take the form of material resources, or of information;

6. *time:* conceived as process, succession, movement, and development, so providing a dynamic sense of boundary;

7. *perspective:* A specific takes on a different aspect when viewed from here rather than there, or at larger or smaller scale. The vantage point of the observer (imagined or otherwise), in terms of position and distance, cannot be omitted. There is a necessarily subjective element to all perception. Dependent on one's perspective, a car can be a form of transport, a status symbol, an investment, or scrap material. The phenomenon of perspective means that there is a distinction between a specific and an

8. *entity:* that which could be understood as the summation of every relevant perspectival specific that relates to a particular entity, the construction of which is in practice only ever achieved provisionally and in part.

It is vital to appreciate that inherent in this set of terms is an implied and inescapable relationality. At the very instant that a boundary is recognized, relationship is given. To recognize a boundary is unavoidably to be presented with a relationship between a "this" and a "that." Consequently, to discern a boundary is inherently to recognize *diversity* in *relationship*. Already it can be appreciated why such a mode of understanding may be relevant to God as Trinity.

Beginning with boundary leads immediately to a conception of diversity in relationship that is *dynamic*. It turns out that boundaries are where the action is to be found (Rayner 1997, 4). This is because, within the created realm at least, no boundary is completely fixed and static. Be it the gradual erosion of a mountain on a geological time scale of millions of years, the ingestion of a worm by a blackbird in seconds, or a paradigm shift in thought, at every boundary the dynamic process relating intext and context is at play.

Within the orbit of this vocabulary, every specific must be understood as dynamically related to that which is not itself. The boundary of a specific also must be seen as part of a nested succession; it both contains other

boundaries (intext) and is itself contained by others (context). Thus, to drastically foreshorten a perspective within natural history, a human being, itself composed of 100,000 billion cells (Gribben 2008, 198), exists within the ecosystem Earth, which itself exists within the solar system, and so on. On this analysis, nothing can be understood without also comprehending a sense of its place.[11] Everything, it seems, is context-specific. Even rocks of a particular form and composition can exist only within a certain range of pressure-temperature space.

To demonstrate the flexibility of these terms beyond a simple material object, consider their possible application to a moral act as a set of illuminating questions. The *specific* in this case would be the act under consideration, and its *boundary* the limit of responsibility constituted by the act: Whose act is it? Its *context* would be its setting in life, while *intext* might denote the habits of mind (virtues) that contributed to it, the intention that motivated it, and the model of the world that informed it. *Permeability* would accordingly be a measure of the degree of mutual conditioning between inner disposition and contextual setting leading to a consideration of the act's appropriateness to both. *Time* constitutes the process of the act from premeditation to final consequence, and its location along some standard, reference timeline. Consideration of *perspective* would draw attention to the vantage point from which it was being viewed, for example that of the performer or the recipient of the act. Finally, *entity* would indicate a notional comprehensive, global account of the act.

The Peculiarities of Life

All distinguishable specifics (and possibly even what are currently perceived as fundamental particles emerging from the singularity of the Big Bang) demonstrate a dynamic process of development in which context becomes intext and vice versa. To take a particularly grand example, planet Earth, like all planets, was formed from the accretion of stellar dust. Later, in the assumed collision with another planetary body that led to the formation of the moon, some of that accreted material was ejected to form a now familiar part of the earth's (new) context. As part of the same process, the earth itself saw context (the other planetary body) become intext. Clearly, inanimate objects can experience a process of shifting relation between intext and context across their boundary. Boundaries are flexible and developing in time. However, for inanimate objects this process occurs as the *automatic* response to internal and external forces. (Existing) living things, even in their simplest form, are qualitatively different.

Life exists as an active, *intentional* process in which intext and context are related via a process of exchange for the sake of self-continuation. Living organisms require dynamic boundaries, with a selective degree of permeability, in order to feed from an external energy source (ultimately the

sun), distribute energy effectively, prevent such energy dissipating into the local environment, and effect the removal of waste products (Rayner 1997, 4). Dynamically bounded life thus sustains itself in a condition far from equilibrium (Schrödinger 1944), so producing peculiar structure and order until death marks an inevitable dissolution to context. The boundary of a living thing, observes Rayner (1997, 4), is thus a "reactive interface" that can open, close, expand, and contract in relation to its context. It is worth recalling that the boundary of a human being is not simply his or her external contour of skin. The nose and mouth, for example, connect to lungs that branch to a surface area of roughly seventy square meters (Jenkins, Kemnitz, and Tortora 2007, 850). In any attempt to draw the human boundary in relation to context, this should be shown. To do so would be to offer a persuasive indication of our orientation toward dynamic exchange with what lies beyond us, without which life is inconceivable.

At the root of life's engagement in dynamic exchange across boundaries lies the cell membrane. This provides both the guarantee of proximity and protection for the interaction of the molecules involved in life's chemistry (Gribben 2008, 197), yet its permeability simultaneously enables the selective flow of resources and information in and out of the cell (Rayner 1997, 42f.).

Living boundaries also demonstrate other forms of dynamism. They are marked by growth and replication. With locomotion comes a further set of possible relations between bounded intext and context. Such relationships are developed again in the activities of life that not only are shaped by context (as in adaptation to a particular ecological niche) but also shape the context in which life finds itself[12] (the creation of new ecological niches) as happened spectacularly when blue-green algae "polluted" the atmosphere with huge quantities of oxygen some 2.5 billion years ago (Staley et al. 2007, 20).

It is not simply material and energetic exchange that are of interest. One of the hallmarks of life is the presence of ubiquitous layers of semiotic process (Hoffmeyer 2008), to which we turn in more detail later. Here the intentional exchange across boundaries includes signs both given and interpreted in a developing world of meaning. With the emergence of self-conscious minds and language, the relationship between self and context takes on a whole new aspect. The mind is capable of instantaneous (imagined) travel, transcending the boundaries of place and time. It can "try out" different contexts in daydreams. It can imaginatively clothe itself in different bodies. Self-conscious mind is thus capable of the manipulation and even the limited transcendence of boundary, while not being able to escape dependence upon its biological base.

The orientation of the evolutionary process[13] could perhaps be described as toward ever-enlarging forms of intentional, boundary-crossing freedom.

At its base there is the process of the cell's acquisition of energy essential to life. At a higher level there is the extraordinary fecundity of living systems that gives rise to ever new species in tandem with their ability to create and colonize new ecological niches. At the richest level there is the unfolding network of "semiotic freedom" as the depth of meaning conveyed and interpreted by species develops (Hoffmeyer 2008, 185–88). A notable example of such 'progression' in the evolutionary process took place roughly 28,000 years ago when the essentially African *Homo sapiens* succeeded the last of the physically better-adapted Neanderthals in Europe assisted by their linguistically sophisticated social culture (Mithen 2005, 222f., 266–68). In the development from inanimate, to living, to moving, to manipulating, to thinking things (which is far from straightforwardly linear) there is a pattern of the increasingly complex reconfiguration of boundary as the relationship between intext and context. Finally a point is reached where boundaries can be temporarily mentally transcended.

THE ORIGIN OF LIFE

The transition from "mere" physical chemistry to the information-bearing, macromolecular chemistry of life, with its utilization of DNA and RNA, is one across a conspicuous contrast. It is yet to be fully understood. Terrence Deacon (2006) offers an intriguing and elegant thought experiment that seeks to occupy the middle territory between prebiotic and fully biotic space and to do so without the requirement of the (seemingly unlikely) spontaneous construction of a process of replication based on complex template molecules. He achieves this by postulating the "autocell."

At the heart of the autocell is the reciprocal coupling of two self-organizing processes: autocatalysis, a set of reactions in which the products catalyze the very process that produced them; and self-assembly, where molecules spontaneously conjoin to a form a structure that is thermodynamically more stable. Consider a scenario where two reactions A + B → C and D + E → F are linked such that C catalyzes the D + E reaction and F the A + C reaction. The presence of an abundant supply of A, B, D, and E would result in runaway production. Consider further that F is a self-assembly molecule capable of building a container. Both tabular and spheroid possibilities are considered by Deacon (2006, 141f.). Such containment inevitably will include the reaction ingredients that produced the shell. Thus, although containment brings the reaction process to a close, it also preserves the conditions of the autocell's origination. If subsequently the autocell is broken apart by some form of environmental agitation, so long as supplies of A, B, D, and E are available, the autocell, by virtue of the catalysts it releases to initiate the process, will have the potential to repair itself or even replicate itself as the broken pieces of the original are used as sites of new construction.

Although not itself living, the autocell appears to be capable of a number of lifelike processes: self-repair, self-replication, and, intriguingly, the possibility of a minimal form of evolution to produce different, competing lineages. The latter possibility arises from the chance enclosure within the autocell of environmental molecules that further enhance its construction process. Accordingly, Jeremy Sherman and Deacon (2007, 894) lay out a possible sequence of steps whereby such evolvability could lead to the ultimate formation of cells that utilize template replication—the signal marker of all present life.

Sherman and Deacon capitalize on the way in which self-repair and self-replication seem to function for the sake of the autocell's own persistence to argue that an autocell can be accorded the status of a minimal individuality. They conclude that the autocell thought experiment can provide a "proof in principle" (2007, 893) that *telos*, goal-directedness, can emerge immanently from a combination of processes that in and of themselves do not demonstrate such a property. The challenge that they perceive this creates for a theological account of *telos* within the world is something to which we shall have cause to return later.

Our immediate interest in the autocell proposal is the way in which the emergence of *dynamic boundaries* appears to be a decisive element of its distinctive properties.[14] Already the autocell has a meaningful "inside" and "outside," exhibiting an exchange between intext and context for the sake of self-preservation. The exchange lacks the intentionality of life; the switch between the two phases of the autocell, open and closed, is entirely dependent on outside influence. Neither is there any active pursuit of "nutrients."[15] Yet, in the cycling between its two phases, the autocell's boundary possesses what we might term an averaged permeability that allows for a seemingly intentional relationship with its environment. Over time, and in staccato steps, it mimics the cell membrane's ability to afford both guaranteed proximity to key substrates and communication with the outside world.

The emergence of life constitutes an event of boundary-crossing freedom (however long and complex the transitional process) in which matter transcends itself to interpretation (discussed below). Deacon's autocell conceives of how a possible crucial stage of this larger process is itself rooted in the emergence of boundary-crossing freedom. It is when an individual specific comes to actively sustain itself in reciprocal relationship with its context via a dynamic boundary.

The Emergence of Meaning

Like Sherman and Deacon, Jesper Hoffmeyer (2008) is not convinced that the intentionality exhibited by life's creatures is a mere epiphenomenon. He seeks to anchor the legitimacy of a notion of meaning in "semiotic

emergence," which, he suggests, provides a more all-embracing framework for the evolutionary process than natural selection alone (2010, 376). In comprehending the semiotic process he, along with many other biologists, draws upon the seminal work of Charles Sanders Pierce (1839–1914) for whom a sign (vehicle) points to something other than itself (the object) by means of an "interpretant"—that is through, and not apart from, an interpretive behavior or thought that connects the two. The interpretation of signs, which is the absolute fundamental of present life, is thus an irreducibly triadic process. It is not reducible to the binary relation of cause and effect. Interpretation requires "reading" information in a way that is context dependent. The same sign can carry a number of interpretations. It is this openness, which introduces the possibility of error or misinterpretation, that lifts the process above mechanical causation. (For more detail see Southgate and Robinson 2010.) The semiotic process, consequently, is "underdetermined" by physical lawfulness (Hoffmeyer 2010, 386). "To interpret normally means to understand an action, a mode or a way of behaving as having a particular meaning." Hoffmeyer thus finds himself "trying to come to terms with processes taking place in the natural world which seem to require description at a level not usually accepted in the natural sciences" (2010, 371).

This ubiquitous interpretive process operates both within an organism at the biochemical level, as in the transcription of DNA (endosemiotics), and between organisms (exosemiotics) (Hoffmeyer 2010, 369). Although only humans readily understand a symbolic connection between sign and object, this interpretive activity, for Hoffmeyer, belongs as part of the pattern of indexical (physical relatedness) and iconic (likeness) connections employed by other living things (2010, 372). He concludes that "all living creatures need to adjust their activities to changing conditions around them and are utterly dependent on the ability to interpret important cues in their surroundings (their local semiosphere) no matter how primitive this interpretive capacity is" (p. 372).

Again, our immediate interest is in boundary. And, tellingly, the relationship between boundary and context appears to be central. Hoffmeyer reports that an essential component of biological causality is the detection of (contextually significant) difference (2010, 373f.), be that between the base pairs of a DNA double-helix or in the detection of another animal by movement, that is, by difference of location. Here Hoffmeyer draws upon Gregory Bateson (1972): The detection of "effective difference" means the discernment of a message, and messages require an interpretive ability not found in the prebiotic world. As we have already assumed, interpretation is inescapably linked to the perception of boundary.

On a broader scale, the overall argument of this essay requires that we observe a connection between Hoffmeyer's "semiotic competence" (2010, 378f.) and what we have termed permeability. The boundaries of an or-

ganism, we have asserted, are a place of dynamic exchange between inside (intext) and outside (context) such that a living being cannot be understood in isolation from this process. This essential permeability also holds for the semiotic world occupied by living creatures. Hoffmeyer reports that the emergence of semiotics is what enables an organism (or indeed the cell) to relate intentionally to its outer world. This happens via an interpretive facility that contextually links other-reference with self-reference (2010, 386). The greater the "semiotic freedom," that is, depth of meaning discerned (2010, 377), of an organism, the greater can be the exchange of information between itself and its context across its boundary. Or we could say, the greater the semiotic freedom the more *penetrating* is the potential understanding of the world, the greater the *transparency* of the world to the organism. Here, then, is another form of boundary-crossing freedom that Hoffmeyer, in support of our earlier proposal, sees disclosing a trend within the evolutionary process: "as soon as we put on semiotic glasses, the evolutionary trend toward the creation of species with more and more semiotic freedom becomes so obvious that we may wonder why it has not been suggested. Mammals are semiotically more competent than reptiles, fishes more than invertebrate animals, and so forth" (2010, 379).

All forms of social organization, culminating in human culture, require that individuals be permeable to their context. With human language, conscious minds become permeable to one another, shaping and shaped by their interrelationship.

THE TRINITY AND BOUNDARY

The vocabulary of boundary generated here has been presented as applicable to the realm of creation, where the experience of boundary is a (relatively) clear and fundamental observation. It may seem entirely misguided, therefore, to attempt any application of these terms to the Trinity, to the God classically held to be beyond boundary. It is necessary to tread carefully here. Yet, if the trinitarian solution to the quandary of the One and the many was in principle to locate unity and distinction within the being of God, this attempt can gain some encouragement. Moreover, a theological reading of the significance of the created order, and especially of the emergence of life, would seem to require more than an arbitrary relationship between what has come to be and the God who gives it being. Our line of enquiry, therefore, is built upon the theological intuition that whatever exists positively in creation[16] is in some sense contained within, and so unfolded from, the trinitarian being of God, even as it remains necessary to distinguish between the ontological levels of God and the world.

I do not examine here in detail the theological grammar that conditions speaking of God as Trinity. Yet it is important to give an account of the key theological assumptions that lie behind the strategy of this essay.

In the West (that is, within the Roman Catholic and Protestant rather than the Orthodox traditions) the doctrine of the Trinity had led a remarkably sterile existence until the middle of the twentieth century. The renaissance of interest can be attributed in large part to the reassertion of a fundamental axiom of trinitarian thinking. To comprehend the import of this axiom we introduce two terms: the *economic Trinity* and the *immanent Trinity*. The economic Trinity is God as God appears in God's actions in the world, in the economy of creation and redemption, of which the Bible is the primary datum. The immanent Trinity is God in God's self, as God "really is." The two expressions are used not to open up a gap between appearance and reality but rather the reverse. They provide a means to claim that *God is as God appears to us*. They open up a route of inference from time to God's being in eternity. As Karl Rahner famously asserted, "The 'economic Trinity' is the 'immanent Trinity' and *vice versa*" (1970, 22).[17] This axiom enables one to argue that God acts in the world (in creation and redemption) by being God's self.[18] That is, God's being and God's act are one. This principle is vital to our argument.

The idea of God as Trinity is to be asserted because salvation has an inherently trinitarian structure. It consists in our coming to participate in the Son's, and specifically the Son's, relationship with the Father through the Holy Spirit (Romans 8:14–17; Galatians 4:4–7). In essence, salvation consists of creation being caught up to participate within the intra-trinitarian life of God as adopted children (sons[19]) (Galatians 4:5). It is for this purpose that the Father sends the Son into the world (Galatians 4:4) and, through the Son, breathes out the Spirit (John 20:22) on those to be redeemed. How is this economic Trinity related to the immanent Trinity? In accordance with our axiom above, Patristic thought, notably in the form of the Cappadocians, argued back from these "temporal missions" of the Son and the Spirit to their eternal ground: The Father eternally generates (or begets) the Son, and the Father eternally breathes out the Spirit through the Son. On the basis of John 15:26 it also was possible to talk about the Spirit eternally "proceeding" from the Father in contradistinction to the Son's generation. But the Son's eternal generation and his temporal sending into the world are not two different acts of God. The sending is but the temporal expression of what is "always" happening in eternity. A parallel argument follows for the Holy Spirit.

For the immanent Trinity these "relations of origin," as they were known, formed the basis of the way to distinguish the Persons of Father, Son, and Holy Spirit within the one being of God. The Father is "unbegotten" (without origin), the Son is "begotten" of the Father, and the Spirit "proceeds" from the Father (see Gregory of Nazianzus [1954] 2006, 199). But they also can be redescribed to give an account of the loving event that is God's life. The Trinity exists in the eternal rhythm of love given and love received. God's being is God's life of reciprocal love.

We can now appreciate, along with Jürgen Moltmann (1981, 112f.), that the Son may be understood as the divinely immanent archetype of creation. Derived from the generational love of the Father, and having his being in responding love to the Father (mediated by the Spirit), the Son exists as a pattern of creation's existence, because creation too is that which is brought into being by love and will find its true vocation in responding in love to God. The Son is the one through whom all things are created (John 1:3; Colossians 1:16; Hebrews 1:2). It is for this reason that the Son, not the Father nor the Spirit, becomes incarnate. And it is thus that the messianic mission, death, resurrection, ascension, and awaited parousia of Jesus Christ is not merely the *example* of the redemption and renewal of creation but its *source*.

It is this continuity between creation and redemption, grounded in the Son, that means redemption, conceived as sharing in the Son's relationship with the Father through the action of the Spirit, may be understood as the *consummation* of creation rather than the imposition upon creation of a new and essentially alien state of affairs. If the Trinity thus provides the inner ground of creation and of creation's consummation, surely it is legitimate to ask whether the Trinity may be comprehended within the framework of our vocabulary of boundary generated to analyze our observable world.[20]

The Trinity, I argue, is the only *specific* that is its own *intext* and *context*.[21] This is because the inherently relational Persons of Father, Son, and Spirit constitute both. That which constitutes the Persons, and so provides the Trinity's "inner" ground of being, the *intext*, is the "relations of origin" introduced above—the dynamic of the giving and receiving of being via generation and procession. Yet this set of relationships, in which each Person finds identity (the Father cannot be Father without the Son, the Son cannot be the Son without the Father, the Spirit cannot be the Spirit without the Father and the Son) is none other than the *context* of relationship in which the Persons of the Trinity play out their reciprocal life of love. The Persons' (contextual) life of love is the ground of their being (intext) and vice versa. We may say that the Son's "inner" reason for being is his "outer" relation to the Father. Thus, uniquely for the trinitarian Persons, intext (inner ground) and context (relationship with the other) are simply two ways of understanding the same reality. The trinitarian *constitution* and the trinitarian *life* of mutual relationship are the same reality variously viewed.[22]

If this analysis is permitted, it provides a way, in principle, of holding together the unbounded God with a world of boundary. Our vocabulary of boundary suggests that boundary is but the relationship of intext and context. If these are two aspects of the same facet for the Trinity, we can justify the traditional assertion that the Trinity is a specific without a boundary. Yet, as the possessor of meaningful intext and context, the Trinity can

be held to be the ground of a world with boundaries. The Trinity, that is, possesses a counterpart to creation's experience of boundary.

What then of the applicability of our other terms of vocabulary? *Permeability* turns out to be highly suggestive. In fact, earlier tradition has a form of speaking about the complementarities of "inner" and "outer" aspects of the Trinity via the notion of what came to be called *perichoresis*[23]—the mutual indwelling of the trinitarian persons in each other. Gregory of Nyssa used just such an implicit ideation to explain how the three infinites of the Persons could together constitute one infinite (Young 1983, 112). Perichoresis marks the height of boundary-crossing freedom—which we have already used to describe the trend of evolution—and so much so that boundary would no longer be boundary! Where intext and context are but aspects of each other, permeability reaches a maximum. Yet, importantly, such permeability does not signal the dissolution of the identity of the Persons because this is rooted in the very relationships to which mutual indwelling alludes.

Advancing another stage in our investigation, the Trinity is also, uniquely, the only specific that constitutes its own *time*. This is not the transient, irreversible time of creation but rather a "time" that transcends our temporality. God has a vantage point from which to redeem all of our time. More precisely, it is time grounded in the dynamic movement of the relations of love between Father, Son, and Holy Spirit. Perceiving movement, and so in some sense time, as part of the divine life avoids the enormous theological difficulties that arise from attempting to comprehend how a God of timeless eternity can relate to a world of time, problems that led Augustine into unsolvable difficulty (Jenson 1984, 141–43). If we are to argue from the economic to the immanent Trinity, how can the Son's participation in our time be meaningfully conceived without some kind of divine correlate to time? Strictly speaking, we should not talk of God's eternity without qualifying it as a "time-full eternity."

Although there is properly no boundary in God, there is, perhaps, *perspective*. If salvation is grounded in our participation in a specifically Son-type niche within the intra-trinitarian life, our "view" of the Trinity is inevitably colored by perspective; it is, if you will, the Son's "view" of the Father and the Spirit that is open to us. Arguing from the economic to the immanent Trinity requires us to give some ontological weight to this observation. Here, we must avoid the temptation of predicating of the Trinity an integrating "view from everywhere" that could not be attributed to the Persons themselves. To do so would be to create a problematic Fourth! The Trinity is nothing other than the interlocking mutual relations of the Persons; the Trinity is "relational being." This suggests that there is properly a way in which the perspective of the Father is not interchangeable with the perspective of the Son or the Spirit. Here again we come close to

the Cappadocian Fathers, for they were unafraid to emphasize the Persons as locations of genuine difference.

Finally we need to consider the distinction between specific and *entity*. It is vital that this distinction should stand. It is needed to differentiate between our fragmentary understanding of God and God's self (1 Corinthians 13:12). Only eschatologically, from the perspective of the end, can we hope to know even as we are known by God. To argue from the economic to the immanent Trinity has never been understood as an exercise in detailed comprehensiveness. It has been much more about obtaining a trustworthy glimpse.

Before bringing these reflections on the Trinity to a close, we should face up to possible challenges to our abandonment of the language of boundary in relation to God. Is there not a sense in which the very act of creation involves God in boundary in that creation means "God does not want to be everything"? Does not the incarnation involve the divine life of the Son in the experience of boundary as embodiment, limitation (to one time and place), and suffering? In one sense, of course, we must answer a qualified Yes to these questions. But the language of boundary as used here is very much conditioned. In particular there are four considerations.

First, God and the world are not ontological rivals competing for the same space. They exist on different levels. Better, the latter can be said to subsist (logically) within the former. A "boundary" between qualitatively different dimensions is of a different order from that commonly meant. Although it is strictly correct to say that a boundary, a distinction, exists between shape and color, it would seem odd to talk of a boundary between an apple's roundness and its greenness.

Second, the incarnation might be thought not so much as a limitation of God, though God experiences limitation through it, but rather as the *extension* of divine life (and experience) into a "simultaneous" participation in the created realm.

Third, it would be wholly wrong to see the incarnation of the Son as affecting but a "part" of God. The incarnation, as all God's actions are, is a properly trinitarian action inescapably involving the Father who sends and the Spirit who enables.

Fourth, it is essential to reckon with the way in which the doctrine of the Trinity overcomes the "problem of transcendence" with which we began. It does so by focusing away from the boundary between the One and the many that creates the issue of how the transcendent God relates to the world. In its place it draws attention to how the bringing of the other into being, and into inherent relationship, is grounded in the grammar of God's life. For *this* God to relate to creation is for God to be God's self. Ontological distinction remains, but the problematic separating boundary (which only really makes sense in a continuum of existence) evaporates.

CREATION AND REDEMPTION: BOUNDARY AND
BOUNDARY INTEGRATION (PERMEABILITY)

Before returning to the evolution and development of life, so as to draw out a possible theological reading of its significance, we need to unfold how the redemptive participation of creation in the intra-trinitarian life may be envisaged. This we do by drawing again on the language of boundary in a brief survey of biblical imagery.

It would be poor biblical scholarship that drew a hard and fast line between creation and redemption in approaching the strata of the Bible. This is because ideas about creation appear to have been shaped by the experience of redemption (von Rad 1975, 136–39). They arise by asking: How is the God experienced in salvation related to the rest of the world? However, this inner connectedness makes the contrast to be found between those passages of the Old and New Testament that speak of the hoped-for new age of salvation and those that speak of present creation all the more arresting. It is a distinction that I characterize as one between boundary formation and boundary integration. A highly selective biblical tour will suffice to make the point.

The process of creation, as described in Genesis 1 and 2, is essentially a matter of the formation and definition of boundary.[24] Formless void and darkness is attended by the potentiality of the Spirit of God (Genesis 1:1). Into this chaos is spoken the structuring word of God: "Let there be. . . ." As a result, light is separated from darkness (vv. 3–5); the firmament of heaven separates the waters (vv. 6–8); earth is separated from sea (vv. 9–11); and various living things are formed (separated) according to their kind, their class of being (vv. 12ff.). Penultimately, humanity is made in the image of God, separated from the rest of the creatures by the defining role of exercising dominion (vv. 26–30). Finally, the Sabbath rest is separated from the days of work (Genesis 2:1–3). Creation as separation is essentially creation as boundary formation. Genesis 1 begins at the furthest limits of the human context and gradually works in to reach us, setting us, so to speak, in our contextual place (Moltmann 1985, 148f.).

The creation of Israel is also a matter of limits and boundaries. The Exodus narrative sees the people of Israel separated out from the Egyptians; the crossing of the Red Sea is the establishment of an initial boundary of difference (Exodus 3–14). Israel subsequently exists as a separated, chosen people with each tribe having its own allotted territory (Joshua 13ff.). The Levites act as a separate priestly caste for the sake of the people (Numbers 3). Israel's identity is marked by a unique covenant with God and its attendant explication in law (Deuteronomy 5).

This is a world where women and men relate to God in particular, material, bounded contexts. Human beings do not relate to God as "brains in jars" but as those who occupy space and time, who are formed of the dust of the earth as well as the breath (Spirit) of God (Genesis 2:7).

If creation is about boundary formation, redemption is fundamentally about boundary integration. The distinct nation of Israel comes to serve as the means to a universal blessing (already the horizon of Genesis 12:1–3; compare Isaiah 2:1–5; 26:5; 42:6; 49:6). In the vision of the age of the Messiah offered in Isaiah 11 the boundaries between predator and prey are overcome in a new community as wolf and lamb, calf and lion lie down together.

Turning to the New Testament, through the death and resurrection of Jesus there is formed a new humanity that overcomes the old separations (Ephesians 2:11–18; Galatians 3:28). Already in Jesus' ministry he had transgressed the ancient boundaries between men and women, Jews and Samaritans (John 4), work and Sabbath (Mark 2:23–28), righteous and sinners (for example, Mark 2:15–17). Jesus thus operates in boundary-crossing freedom. It is not for nothing that marriage, in which two are understood to become one flesh (Genesis 2:24)—an integration of boundaries to form a new double-sided entity—can be used as an image of redemption (Ephesians 5:21–33). Indeed, the new identity of those who find salvation is inherently relational: The "old I" has gone, and a "new I" that can define itself only in relation to Christ takes its place (Galatians 2:20; Colossians 3:3).[25]

The ultimate horizon of redemption, the new creation, signals an end to the old binary opposites that structured the world. Neither circumcision nor uncircumcision (the fundamental marks of distinction) mean anything, but only a new creation (Galatians 6:15). More, the new creation is fundamentally about reconciliation (2 Corinthians 5:17ff.), hinting at a final universalism in which even the distinction between saved and unsaved becomes precarious (1 Corinthians 15:20–28; Ephesians 1:10; Colossians 1:20). Rather, God will be all in all (1 Corinthians 15:28). The end is "eschatological panentheism" as God comes to interpenetrate the world (Revelation 21:2f.) with a new obviousness that obviates the need for a separate, sacred place; the temple is no more (Revelation 21:22). It makes sense, therefore, that the mediator of reconciliation, Jesus Christ, is himself held to be one person in two natures (as affirmed by the Council of Chalcedon in 451 C.E.), holding together, in his person, the created and the uncreated.

In the context of a redemption that concerns the integration of boundaries it is entirely comprehensible that Martin Luther could speak about the sinner as *homo incurvatus in se* (the human being curved in upon oneself) (see Moltmann 1979, 122). The one who maintains an autonomous boundary over against others, curved in upon oneself, can have no part in the boundary-integrating process of redemption.[26]

However, redemption is not about the elimination of boundary, as if past boundaries no longer held any significance. The Holy Spirit can be conceived as the power of both *individuation* (1 Corinthians 12:7–11)

and *fellowship* (2 Corinthians 13:14) (Moltmann 1985, 100), so that redemption is not about the absorption of all into an amorphous Christ as if the redeemed have only one shared biography. Rather, the new creation is the place into which are brought the distinctive riches of creation (1 Corinthians 3:10–15; Revelation 21:26).

Ultimately, if the new creation is grounded in the resurrection of the dead, in the giving of a future (that transcends transient time) for those who are past (locked in transient time), it cannot be conceived, as Moltmann rightly observes (1996, 26), without a change in the transcendental conditions of time. A helpful way to envisage what this means is to ask: How old will one be in the new creation? The answer, according to the pattern discerned above, would have to be the perfect integration of every age one has been. The new creation is the place where the young child we once were and the old person we (hopefully) become shake hands with each other in mutual recognition and agreement. Not only might the new creation be envisaged as the integration of now and then, one also could ask about the integration of here and there and a corresponding shift in the nature of space. Does it make sense to say that in the new creation one indwells all the spaces of one's life? I think it may, suggesting, again, that there occurs in redemption a radical shift in the experience of boundary.

To make this language of boundary integration more comprehensible, consider the analogy of music. In an ensemble piece, without the loss of the definition of each instrument, there occurs an integration of pitch, tonality, and rhythm to produce a new reality. Perhaps creation's participation in the intra-trinitarian life of God is akin to a new symphony woven out of the themes of life. It would arise from the combination of the music of one's integrated existence (purged of sin and negativity) open for harmonization with that of others and placed over the supporting "ground bass" of the Trinity in unending improvisation.

Helpful as this analogy might be, precision demands the attempt at a more prosaic elucidation of what is intended. We already have explored how the Trinity might properly be understood as the ground of a bounded creation. What we must show now is how this same conception of the Trinity affords the basis for the boundary-integrating shape of redemption examined above.

In essence, this task has been achieved already. In demonstrating how intext and context are integrated in trinitarian existence, as but two sides of the same defining relationships of Father, Son, and Holy Spirit, we concluded that the trinitarian Persons are not limited by each other, that there is no experience of boundary as such. Rather, there is perspectival diversity. The relationship of the Persons therefore may be seen as a ground plan for redemption if we view redemption as a *creaturely* participation in perichoresis. Such a prospect is precisely what appears to be held out in John 17:21ff., which seems to imply that the perichoretic fellowship of Father

and Son is open for such inclusion. It is a prospect of boundary integration without loss of definition that may ground an experience of "time" without the "before" and "after" of transience and an experience of "place" without separation (see Moltmann 1979, 128). In other words, participation in the trinitarian perichoretic fellowship of God could underwrite precisely the form of the new creation envisaged above.

What is vitally important—and hinted at in the emphasis on *creaturely*—is to distinguish what creation's conformation to and participation in the trinitarian life of God means for creation and what it means for God. I have in mind not the absorption, and so disappearance, of creation in God. Rather, I am suggesting a higher-level participation in God of the creation that exists only to the extent that it is already in relation to God. The watchwords for the redemptive imagination must be consummation, completion, and fulfillment, which guard against any sense of alien replacement. Over against classical theism, God is not the inverse of creation. Thus, closer participation in God may be held to provide *enhancement* of creatureliness, not its negation. Consequently, boundary integration may be taken as the creaturely equivalent of divine life without boundary. There is a consonance but not a confusion between the creaturely and the divine modes of being in redemption.

THE EMERGENCE AND EVOLUTION OF LIFE AS A SIGN AND PARABLE OF REDEMPTION

The church constitutes that part of the world that explicitly seeks to form an anticipation of the new creation under the conditions of present history. But, how might creation itself act as a sign of its own future in God? More specifically, how do the emergence of life and its evolution into divergent and complex forms represent such a sign?

I propose that the answer is by constituting the elevating series of examples of boundary-crossing freedom identified above. In its various interweaving, dynamic relationships between intext and context, as an exchange both in the currency of resource and information, life constitutes a vestige of the trinitarian life of loving exchange. But the Trinity is not only the ground of existence as it is (creation); it also constitutes the ground of existence as it will be (redemption). Distinguishing the two is the qualitative degree of creation's participation in God's life. If the emergence and evolution of life can be understood as a vestige of the Trinity, *precisely because of this* it also can be viewed as a parable of the boundary integration, the enhanced permeability, that is held out as the prospect of redemption through creation's participation in the intra-trinitarian life of God.

The fundamental tool used here to demonstrate this consonance between the Trinity, redemption, and the evolution of life has been the applicability, albeit suitably nuanced, of the same vocabulary of boundary. That

all but one of the same terms could be meaningfully employed is an indication of the continuity that exists between life's evolution, the hoped-for redemption of creation, and the Trinity that is the ground of both. That these terms must be appropriately nuanced, that boundary as such is not applicable to the trinitarian life—even though the inherently relational diversity that worldly boundary discloses most certainly is—points to the irreducible degree of discontinuity that pertains between God and creation.

Perhaps the best demonstration of this continuity in discontinuity comes from a consideration of permeability. The autocell, standing between life and physical chemistry, displays two-way permeability in its most rudimentary form, as a precarious cycling between open and closed phases. Already the living cell trades not only in a dynamic exchange of nutrients but also in information. And it does so actively, intentionally. The peak of semiotic freedom, as seen at any point along evolution's unfolding, increases with time. This happens not as a smooth linear progression but as a series of steps, unpredictable in detail yet with an overall upward trend. Currently sitting atop this series is the integration of self-conscious minds, a permeability of meaning made possible through the use of symbolic language.

Redemption as resurrection of the dead, however, envisages permeability on a different level, one that transcends the current experience of time and space. Here, without loss of identity, is the integration of now and then, here and there. We come, as it were, to indwell, to permeate, all the experiences of life that have made us who we are. Here only a fully realized relational identity finds place; I can be myself only through those who are not me. The pretended independent identity, which believes it has no need of the other, is exposed as fallacious.

But it is in the Trinity that permeability, in the form of perichoresis, finds its highest qualitative expression in a way that remains appropriate only to God. What would occasion the loss of creation's identity, of its own peculiar ontological form of relationship, through the elimination of boundary, is for God the expression of relational being par excellence.

Offered here is not a "proof" of the Trinity on the basis of the world but rather a presentation of the plausibility of a theological evaluation of the world on the basis of the account of God as Trinity. What then of the challenge to theologically conceived *telos* thrown down by Sherman and Deacon? This is the challenge that *telos* that inherently emerges from the material realm as a new phenomenon does not require theological justification and, in fact, raises the question of whether transcendent, nonmaterial *telos* is an intelligible concept (Sherman and Deacon 2007, 898).

Two observations must suffice. First, their argument is essentially circular. If *telos* is defined as that of which science can give an account, that fits within its particular network of assumptions, it is bound to be the case that a notion of a *telos* beyond the bounds of science is highly question-

able. Second, what is theologically provocative about the material order is not that observable *telos* seems to need some outside source to account for it, as if theology traded in only the miraculously inexplicable (as seems to be the case with "intelligent design"). It is rather that the material order, taken as a whole and in its entirety, is such as to be open to the emergence of *telos*. If natural science is one day able to offer a complete explanation, within its own terms, for this emergence, that will not signal an end to the theological question of its significance. It is not only a question, with Gottfried Leibniz, of why there is something rather than nothing. It also is a question of why there is this *emergent* something rather than chaos. That explication is possible within the scientific frame is what raises the question. Why should the world be explicable?

CONCLUSION

Boundary is such a fundamental experience of the world, and the unbounded nature of God such a basic statement of theism, that without some way to hold the two together it seems difficult to maintain that *this* world is the product of *this* God. The vocabulary of boundary proposed here is intended to be a way of showing how the boundless God can be the author of a bounded world heading, in the grace of God, toward a boundary-integrated future of redemption. The evolution of life, life marked by dynamic, permeable boundaries open for exchange of resource and information with context, may be seen as a sign and parable tentatively pointing toward this redemptive prospect.

NOTES

1. According to Boethius's (c. 480–c. 524 C.E.) classic definition, "Eternity, then, is the complete, simultaneous and perfect possession of everlasting life" (1968, 163).
2. This was Augustine's pressing question (1945, 216–20).
3. In the account that follows I am dependent on Frederick Copleston (1946, 464–69).
4. A concise summary of Origen's trinitarian thinking is offered by Stuart G. Hall (2005, 105–7).
5. Fundamental to the Christian conception came to be the notion of *creation ex nihilo*, creation out of nothing. This was taken to guard the sovereign freedom of God—there were no inner or outer constraints to God's creating—and to underline the radical dependence of creation on God for its existence at every moment. Creation is the free gift of existence to that which is not God.
6. Athanasius (c. 296–373) was an ardent defender of this option. This was not least because otherwise Jesus Christ is only a mediating figure, not God in the fullest sense. Moreover, if redemption involves new creation, it can be the work only of God (see, for example, Ayres 2004).
7. The Cappadocian Fathers included Basil the Great (c. 330–379 C.E.), his lifelong friend from student days, Gregory of Nazianzus (329–389 C.E.), and his younger brother, Gregory of Nyssa (330–395 C.E.). For an excellent introduction see Meredith 1995.
8. "What, then? Is the Spirit God? Most certainly. Well, then, is he consubstantial? Yes, if he is God" (Gregory [1954] 2006, 199).
9. *Intext* is a rather ugly, invented word. I might have used *content*, but I wanted a term that was clearly parallel to context and its sense of structural ordering. *Content* seemed to lack this sense.

10.   I owe the need for such a term to Alan Rayner (1997) and his later explication of the notion of "inclusionality" (2004).

11.   This is a term of which Rayner (2004) makes much as the primary term of localized identifiability.

12.   Rayner makes this point strikingly in his redefinition of ecological niches, which become "open-ended segments of space, time and energy whose boundaries . . . both define and are defined by the living-systems that inhabit them" (Rayner 1997, 18). In later work (2004) he speaks of a process of "attunement" or "resonance" between organism and niche to emphasize the mutual co-creativity of this process.

13.   I am aware that the notion of orientation, of *telos*, applied to the evolutionary process amounts to heresy by the standards of Neo-Darwinian orthodoxy (supported by such luminaries as Stephen Gould [1996]). Elsewhere (Law 2009) I have sought to defend its use in relation to human evolution. I am encouraged by the willingness of Jeremy Sherman and Terrence Deacon (2007) and Jesper Hoffmeyer (2008) to embrace an emergent notion of *telos* that can properly belong within a strictly scientific purview.

14.   For Deacon himself, the decisive factor is complementarity of process (2006, 139f.).

15.   Southgate and Robinson present a model of the autocell that does possess a limited interpretive ability (Southgate and Robinson 2010).

16.   This includes the freedom of process and of individuals, which, although the cause of negative consequences, serves the purpose of an otherwise unattainable good: true subjectivity.

17.   Compare Karl Barth's key principle: "statements about the divine modes of being [trinitarian Persons] antecedently in themselves cannot be different in content from those that are made about their reality in revelation [the scriptural testimony]" (1936, 479).

18.   In addition to constituting a method of argument, this axiom also reconnects ideas about the Trinity with the language of salvation. In so doing it renders the Trinity relevant to what we might call mainstream theological concern.

19.   A preference for inclusive language runs into trouble here if it prevents the explicit connection being made between the status of "children of God" and its trinitarian ground in Jesus the Son.

20.   Like all creaturely language of God (and to what other do we have access?) the application of these terms will be rooted in the metaphorical dynamic of 'is' and 'is not'. But the attempt to predicate human language of God is grounded in the incarnation of the Son. We have, as it were, divine permission for the attempt.

21.   That God is God's own context carries the important corollary that the world is *not* God's primary context—that it is not essential to the realization of God's being. God does not have an instrumental need of creation and therefore is free to act out of sheer grace in relation to creation.

22.   Here I take issue with Moltmann (1981, 162–78) who, curiously, seems to hold them apart.

23.   This term was first used by Maximus the Confessor (c. 580–662 C.E.) of the mutual indwelling of the two natures in Christ and then transferred to trinitarian thought by John of Damascus (c. 675–c. 749 C.E.). It simply serves as a way of expressing what had already been imagined by the Cappadocians and others (Turner 1983, 112).

24.   Although it would be entirely against the grain of the genre of literature to which Genesis belongs to read it as a quasi-scientific account of origins, I cannot help but observe that a world that unfolds from the singularity of the Big Bang is itself produced through the introduction of boundary where boundary did not previously exist.

25.   This is the observation of Helmut Thielicke (1978, 181–84).

26.   Because of space restrictions I do not develop this notion of sin as a refusal of relation any further here. It would, however, be required in a comprehensive presentation of the implications of the approach I have adopted. Also left out of this account is a response to the problem of suffering encountered by living things. For an excellent critical review of possible options see Southgate 2008.

REFERENCES

Augustine, Bishop of Hippo. 1945. *Confessions*. Trans. F. J. Sheed. London: Sheed and Ward.
Ayres, Lewis. 2004. *Nicaea and Its Legacy: An Approach to Fourth-Century Trinitarian Theology*. Oxford: Oxford Univ. Press.
Barth, Karl. 1936. *Church Dogmatics I.1*. Edinburgh: T&T Clark.
Basil, Bishop of Caesarea. 1980. *On the Holy Spirit*. Trans. David Anderson. Crestwood, N.Y.: St. Vladimir's Seminary Press.
Bateson, Gregory. 1972. *Steps to an Ecology of Mind*. New York: Ballantine.
Boethius, Anicius Manlius Severinus. 1968. *The Consolation of Philosophy*. Trans. Victor E. Watts. London: Penguin.
Copleston, Frederick. 1946. *History of Philosophy*. Vol. 1. London: Search.
Deacon, Terrence. 2006. "Reciprocal Linkage between Self-organising Processes Is Sufficient for Self-reproduction and Evolvability." *Biological Theory* 1 (2): 136–49.
Gould, Stephen J. 1996. *Life's Grandeur: The Spread of Excellence from Plato to Darwin*. London: Random House.
Gregory of Nazianzus. [1954] 2006. "The Theological Orations." In *Christology of the Later Fathers*, ed. Edward R. Hardy, 128–214. Louisville, Ky.: Westminster John Knox.
Gribben, John. 2008. *The Universe: A Biography*. London: Penguin.
Hall, Stuart G. 2005. *Doctrine and Practice in the Early Church*. 2d ed. London: SPCK.
Hoffmeyer, Jesper. 2008. *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*. Scranton and London: Univ. of Scranton Press.
———. 2010. "A Biosemiotic Approach to the Question of Meaning." *Zygon: Journal of Religion and Science* 45:367–90.
Jenkins, Gail W., Christopher P. Kemnitz, and Gerard J. Tortora. 2007. *Anatomy and Physiology: From Science to Life*. Hoboka, N.J.: Wiley.
Jenson, Robert W. 1984. "The Triune God." In *Christian Dogmatics,* Vol. One, ed. Carl E. Braaten and Robert W. Jenson, 79–191. Philadelphia: Fortress.
Law, Jeremy T. 2009. "Unfolding Conversation: A Theological Reflection on the Evolution of the Brain/Mind in *Homo Sapiens.*" In *Theology, Evolution and the Mind,* ed. Neil Spurway, 130–54. Newcastle upon Tyne: Cambridge Scholars Publishing.
Meredith, Anthony. 1995. *The Cappadocians*. London: Geoffrey Chapman.
Mithen, Stephen. 2005. *The Singing Neanderthals: The Origins of Music, Language, Mind and Body*. London: Phoenix.
Moltmann, Jürgen. 1979. *The Future of Creation*. London: SCM Press.
———. 1981. *The Trinity and the Kingdom of God*. London: SCM Press.
———. 1985. *God in Creation: An Ecological Doctrine of Creation*. London: SCM Press.
———. 1996. *The Coming of God: Christian Eschatology*. London: SCM Press.
Rahner, Karl. 1970. *The Trinity*. London: Burns and Oates.
Rayner, Alan D. M. 1997. *Degrees of Freedom: Living in Dynamic Boundaries*. London: Imperial College Press.
———. 2004. "Inclusionality and the Role of Place, Space and Dynamic Boundaries in Evolutionary Processes." *Philosophica* 73:51–70.
Schrödinger, Erwin. 1944. *What Is Life? The Physical Aspect of the Living Cell*. Cambridge: Cambridge Univ. Press.
Sherman, Jeremy, and Terrence Deacon. 2007. "Teleology for the Perplexed: How Matter Began to Matter." *Zygon: Journal of Religion and Science* 42:873–901.
Southgate, Christopher. 2008. *The Groaning of Creation: God, Evolution and the Problem of Evil*. Louisville, Ky., and London: Westminster John Knox.
Southgate, Christopher, and Andrew Robinson. 2010. "A General Definition of Interpretation and Its Application to Origin of Life Research." *Biology and Philosophy* 25:163–82.
Staley, James T., et al. 2007. *Microbial Life*. Sunderland, Mass.: Sinauer Associates.
Thielicke, Helmut. 1978. *The Evangelical Faith*. Vol. 1. Edinburgh: T&T Clark.
Turner, H. E. W. 1983. "Coinherence." In *A New Dictionary of Christian Theology*, ed. Alan Richardson and John Bowden, 112). London: SCM Press.
Von Rad, Gerhard. 1975. *Old Testament Theology*. Vol. One. London: SCM Press.
Young, Frances. 1983. *From Nicaea to Chalcedon*. London: SCM Press.