

# AN EASTERN ORTHODOX CRITIQUE OF THE SCIENCE–THEOLOGY DIALOGUE

*by Christopher C. Knight*

*Abstract.* On the basis of both philosophical arguments and the theological perspectives of Eastern Orthodox Christianity, a critique of two beliefs that are common within the mainstream science–theology dialogue is outlined. These relate to critical realism in understanding language usage and to naturalistic perspectives in relation to divine action. While the naturalistic perspectives on the history of the cosmos that are predominant within the dialogue are seen as generally acceptable from an Orthodox perspective, it is argued that they require theological expansion. This expansion suggests an understanding other than the “causal joint” model commonly adopted in relation to “special” divine action. This alternative model renders the distinction between “special” and “general” divine action redundant, and is based on what has been called a “teleological-Christological” understanding of the cosmos, rooted in the fourth gospel’s notion of the divine *Logos*. The relevance of this critique to scholars outside of the Orthodox community is urged.

*Keywords:* causal joint; critical realism; divine action; Eastern Orthodoxy; miracles; naturalism

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The mainstream science–theology dialogue is still based largely on an agenda and approach that were developed in the second half of the twentieth century. Three figures were dominant in this development—Ian Barbour, Arthur Peacocke, and John Polkinghorne—and their overlapping understandings have been helpfully compared by two of them (Polkinghorne 1996; Barbour 2012). Even though Polkinghorne, in his later work, began to put more stress on his own particular theistic tradition, it is still the case that participants in the dialogue often proceed as he did in his earlier work and as the other two did throughout their lives. This was to attempt to answer certain key questions in terms of a rather abstract theism, failing to recognize fully the way in which the distinctive perspectives of particular theistic traditions might affect the answers given to those questions.

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In this article, I shall illustrate this observation by examining the way in which two of the core beliefs usually held by participants in the science–theology dialogue are challenged by ways of thinking that are prevalent within one particular theistic tradition: that of Eastern Orthodox Christianity. As we shall see, this tradition—with its roots in the patristic thinking of the early centuries of the common era—offers insights that are relevant not only to members of the Orthodox community but also to those adhering to other Christian traditions and even to those of faith traditions beyond the boundaries of Christianity.

There are three types of response among Orthodox Christians to the sciences of our time. Two of these may be broadly analyzed in terms of the categories described by Ian Barbour (1990, 3–30) as *conflict* and *independence*. Into the first of these categories falls the approach exemplified by the work of Seraphim Rose (2000), which has been questioned from an Orthodox perspective by George and Elizabeth Theokritoff (2002). The second category is exemplified by the work of Alexei Nesteruk (2008). In Nesteruk’s approach, both science and theology are seen as having roots in the experience of being human, which are explorable through a phenomenological approach. However, while the two activities are in this sense linked in his thinking, they remain independent insofar as science is not seen as posing direct questions for theology in the way assumed in Barbour’s other two categories of *dialogue* and *integration*.

Because the approaches exemplified by the work of Rose and Nesteruk have little in common with the understandings of the majority of participants in the current science–theology dialogue, I shall not consider them further here. I shall focus instead on another approach that is rooted in Orthodox theology: that of my own work (e.g., Knight 2001, 2007). This is arguably of a kind that straddles the categories described by Barbour as *dialogue* and *integration*. Unlike the approaches of the other two, it stands in agreement with much of the broad consensus that exists among participants in the mainstream science–theology dialogue of the present time, and thus may interact with that consensus in a fruitful way.

From this particular Orthodox perspective, two major characteristics of the existing consensus stand out as requiring critique or expansion. The first of these is the understanding of both scientific and theological language usage that is usually described as being a form of critical realism. This understanding is, I shall suggest, correct in its belief in the possibility of valid reference in the two kinds of language, but mistaken in its focus on ontology. This focus is, as we shall see, susceptible to a critique from both philosophical and theological perspectives.

The second characteristic of the mainstream science–theology dialogue that I shall address is one that I see as linked to the first. This is the way in which most of the dialogue’s participants see naturalistic perspectives as relevant to understanding, not only the development of the cosmos,

but also those events usually seen as the outcomes of “special” divine action. In order to avoid an older Western “God of the gaps” approach—in which divine action was effectively identified with events that did not seem susceptible to naturalistic explanation—God is seen as being active in all such events “in, with, and under the laws of nature.”

This naturalistic focus has, I shall argue, been valid in its intention and in many of its conclusions, but it has not been fully considered from a theological perspective. In particular, as we shall see, an expansion based on Orthodox insights gives rise to a critique of what is sometimes called the “causal joint” model used by many to account for events that they see as outcomes of “special” divine action. This model, I shall argue, may not only be questionable for philosophical and theological reasons, but may also be seen as irrelevant if one abandons the distinction between “general” and “special” divine action in the way that aspects of Orthodox theology suggest is possible.

#### SCIENTIFIC CRITICAL REALISM

The first characteristic of the mainstream science–theology dialogue that Orthodox Christians may question is, then, its particular way of talking about “critical realism.” This term, as it is most commonly used within the dialogue, is taken to mean not only that both science and theology point towards reality, but also that their languages manifest a genuine grasp of the ontological status of the entities of which they speak. In order to avoid the kind of “naïve” realism that fails to take changes in scientific understanding into account, it is recognized—in a way that leads to the term “critical” being used—that the truth embodied in scientific language at any particular time is not absolute but only “approximate.” Nevertheless, it is assumed that scientific progress involves better and better approximations to ontological truth, and this understanding is then extrapolated to apply not only to scientific but also to theological language usage.

This view rests not only on equating some of the characteristics of theological and scientific language usage in a way that may be questionable. It is rooted also in an interpretation of scientific progress that relies largely on what is taken (perhaps simplistically) to be Karl Popper’s notion that this progress involves “increasing verisimilitude” in ontological description of the world. One of the things that has been lacking in the widespread adoption of this understanding has been an adequate acknowledgment of the philosophical problems associated with it, which have led one commentator to describe scientific critical realism as “a majority position whose advocates are so divided as to appear a minority” (Leplin 1984, 1). This division among advocates of scientific critical realism suggests that the version of it regarded as valid by most participants in the science–theology dialogue may require more detailed examination than they usually give it.

This may be done, I have argued (Knight 1995; 2001, 91–105), through the understandings of two philosophers of science who point towards a much subtler and less problematical approach to critical realism than is usually evident.

The first of these philosophers, Mary Hesse, has focused on physics and spoken about what she calls its “structural” realism. “It is undeniable,” she says, “that mathematical structures become ever more unified and universal with every advance in theory; the structural realm of physics is truly progressive.” However, she goes on, “the substantial description of what the structures relate changes radically from theory to theory” (Hesse 1988, 188), so that there is no good reason to claim progress at the level of substantial description. In a comparable way, but looking at the question from a different perspective, Rom Harré has spoken of what he calls “referential” realism. He distinguishes two types of scientific reference, exemplified by the statements “this grey powder is a sample of gallium” and “whatever is the cause of these bubbles is a neutrino.” The second of these statements, he points out, involves not simply “picking out a figure from a ground” but something more complex: a “cognitive act of conceiving and accepting a theoretical account.” This does not mean, he argues, that there is not genuine reference in this statement, but it does mean that the physicist’s usual assumption—that the neutrino thus referred to is a “particle”—is not an intrinsic part of the act of reference. It is, says Harré, “the conservative metaphysical predilections of physicists that push the ontology that way” (Harré 1986, 101), and he points out that there is an alternative metaphysics available in the understanding developed by the quantum physicist David Bohm (1980).

Hesse’s and Harré’s arguments—which may perhaps be expandable in terms of the notion of *ontological relativity* developed by W. V. Quine (1969)—do not, of course, mean that there is no ontological basis to the entities referred to in scientific language. What they do indicate, however, is that there may be insurmountable epistemological limitations to our grasp of their ontology.

#### APOPHATICISM AND NONMATERIALISM IN ORTHODOX THEOLOGY

Acknowledgment of these limitations leads to a position in relation to science that is reminiscent of the view of theological language that is characteristic of Orthodoxy. Especially as expounded by people like Vladimir Lossky,<sup>1</sup> this view manifests a different understanding than any to be found in a Western theological tradition. This understanding is rooted in a number of patristic writings, and in particular in those attributed to Dionysius the Areopagite. These writings distinguish two possible theological ways: that of cataphatic or positive theology, which proceeds by affirmations, and that of apophatic or negative theology, which proceeds by negations.

Lossky notes that in Western theology these two ways—if acknowledged at all—tend to be reduced to one, simply making negative theology a corrective to affirmative theology. The Orthodox understanding, Lossky suggests, tends to have a different and more radical understanding of the importance of apophaticism, so that cataphatic affirmations are seen primarily as providing a kind of ladder towards an increasingly contemplative and nonconceptual knowledge of God.<sup>2</sup>

Sometimes, the radical apophaticism of Orthodox theological writers is understood by them only in terms of the Areopagitic recognition that categories comprehended in relation to created things cannot be applied straightforwardly to God. However, in the patristic understanding, apophaticism was sometimes understood more broadly. For Basil the Great, in particular, it was (as Lossky notes) “not the divine essence alone but also created essences that could not be expressed in concepts. In contemplating any object we analyze its properties; it is this which enables us to form concepts. But this analysis can in no case exhaust the content of the object of perception.” There will always remain a kind of “residue, which escapes analysis and which cannot be expressed in concepts, it is the unknowable depth of things, that which constitutes their true, indefinable essence” (Lossky 1957, 33).

Over and above the modern philosophical arguments about ontology that I have outlined, this Basilian type of apophaticism may well make Orthodox Christians wary of the simplistic scientific critical realism that is characteristic of the Western science–theology dialogue. A further source of wariness may be that most of the dialogue’s participants implicitly assume the kind of materialism that denies the validity of any kind of idealism, tending to ignore the fact that this denial has not always been typical of modern scientists. They only rarely, for example, pay attention to the early twentieth century astrophysicists, James Jeans and Arthur Eddington, who wrote popular books that interpreted science in an idealistic spirit, arguing that modern physics seemed to require such an interpretation. The later avoidance of such interpretation among scientists may perhaps be attributed in part to the effect of the philosophical criticism of Eddington’s and Jeans’s arguments that was made by L. Susan Stebbing (1937). This widely read criticism was such that later scientists—even if their instincts were of an idealist kind—became wary of trespassing on philosophical territory in which they had little or no formal training.

Participants in the science–theology dialogue have generally followed these later scientists in this wariness. The question remains, however, of whether there may remain some validity in the views advocated by Jeans and Eddington, which are reminiscent of the eighteenth century idealism of George Berkeley. One modern religious philosopher, Keith Ward, has pointed out that the common rejection of Berkeley’s views is often based, not only on a profound misunderstanding of those views, but also on

ignoring the implications of theistic perspectives (Ward 2012). Moreover, in the patristic period, on which Orthodox Christians put so much stress, we can see something distinctly reminiscent of the Berkeleyan understanding in the views of the patristic author who addressed these problems most directly: Gregory of Nyssa (Karamanolis 2013, 101–07). In addition, as Joshua Schooping (2015) has pointed out, we can see parallels between Gregory's views and the quasi-idealist metaphysics of the quantum physicist David Bohm (1980). In Gregory's approach, the reality of created things is seen as being grounded, not in an ontology that is materialist and is fully accessible to human reason, but in the way in which those things exist in the mind of God.

Orthodox Christians, if they take all these factors into account, will not deny that we can properly refer to God and to the structure of the world. However, their apophatic reluctance to believe that we can say anything about the essence of God, or can fully comprehend the essence of created things, will have consequences in many areas of theological reflection.

One of the most important of these, it seems to me, is the question of how we can legitimately conceive of God acting in the world. Orthodoxy's apophatic attitude, I would argue, tends to lead to the questioning of a notion that is implicit in much of the current discussion of divine action among participants in the science–theology dialogue. This is that God sometimes acts in a way comparable to the way in which human persons must act: through some sort of linking mechanism or “causal joint” which connects the actor and the thing acted upon. As we shall note, much of this approach is based on a notion of divine “personhood” that derives from projecting onto God notions of personhood derived from the human experience of being persons. For those who are attentive to the Areopagitic wariness of applying to God notions derived from the experience of created things, this derivation must surely be deeply suspect.

#### NATURALISTIC PERSPECTIVES

It is in relation to the notion of God's use of the evolutionary process that naturalistic perspectives—at least as usually presented—are commonly a cause of disquiet among Orthodox Christians. This disquiet is, however, unnecessary, and it would be lessened or eradicated if—as has happened within the mainstream science–theology dialogue—some of the early Western theological analyses of Darwinism were taken more fully into account. In particular, the arguments of Aubrey Moore, published in 1889, have been extremely influential in that dialogue and are relevant to Orthodox Christians too. Arguing against the notion of “special creation”—in which the first chapter of *Genesis* is seen as implying that God created the world in a series of supernatural acts—Moore suggested that the Darwinian view is “infinitely more Christian.” For, he argued, that view may be seen as

implying “the immanence of God in nature and the omnipresence of his creative power.” Those who oppose the evolutionary understanding, and defend a notion of “continued intervention,” he goes on, seem to have failed to notice that “a theory of occasional intervention implies as its correlative a theory of ordinary absence” (Moore 1889, 184).

This sense of the continuous action of God through natural processes is something that Orthodox Christians can surely affirm, especially when certain patristic perspectives are taken into account. For example, Augustine of Hippo not only (like Gregory of Nyssa and others) saw the creation of the world as a single act rather than as a series of acts, but also quite specifically speculated about the way in which God may in the beginning have created potentialities—“seeds”—that would be actualized only at a later time.

It may be true that the patristic authors assumed that natures are fixed, and that this assumption—the prevailing one in the early centuries of the common era—is clearly challenged by the notion of new species arising through evolutionary processes. Nevertheless, as Andrew Louth has noted in relation to the seventh-century author Maximos (or Maximus) the Confessor, patristic thought, with its implicit dynamism, is still “open to the idea of evolution . . . as a way of expressing God’s providence” so that it “can be re-thought in terms of modern science” (Louth 2004, 189, 193). Moreover, as Panayiotis Nellas has noted from another perspective, patristic anthropology is not incompatible with evolution. The Fathers, he observes, held that the “essence of man is not found in the matter from which he was created, but in the archetype [the incarnate Logos] on the basis of which he was formed and towards which he tends.” It is for this reason, he goes on, that “the theory of evolution does not create a problem . . . because the archetype is that which organizes, seals and gives shape to matter, and which simultaneously attracts it towards itself (Nellas, 1997, 33).

These perspectives point towards the way in which Orthodox Christians should be able to accept naturalistic perspectives on evolution in much the same way as has happened within the mainstream Western science–theology dialogue. We should note, however, that to speak in the way that Nellas does—in terms of a particular understanding of the divine *Logos*—is to point towards a far subtler notion of the character of the “laws of nature” than is usually to be found among participants in that dialogue. As we shall see further, patristic perspectives provide for Orthodoxy a much richer and more theologically potent view of naturalistic processes than those to be found at present in most other forms of Christianity, and these perspectives may prove relevant to advocates of these other forms and even, perhaps, to those of other faith traditions too.

## THE CAUSAL JOINT MODEL OF “SPECIAL” DIVINE ACTION

The view of divine action that has been prevalent in the mainstream science–theology dialogue involves, as I have noted, what is sometimes called a “causal joint” understanding, in which the term *causal joint* is used to refer to the point, juncture, or joint at which God acts or “causes” things to happen in time and space. This view has been developed on the basis of a distinction that has long been common in Western theology: that between “general” divine action and “special” divine action,

The first of these categories refers to events that occur through the benevolent “design” of the world, and that involve nothing more than the normal operation of the laws of nature. While at one time this was thought about (as it still is by advocates of “intelligent design”) in terms of the “design” of each individual part of the cosmos, this older understanding is now commonly expanded so as to allow for a purely naturalistic understanding of the universe’s development. It is the whole cosmos—not each of its parts separately—that is now generally seen as benevolently designed.

The second of these categories—“special” divine action—refers to events that occur through divine response to events in the world, and in this sense it represents interference with the world’s usual workings. Within the mainstream Western science–theology dialogue, this is now commonly expressed, not in terms of a notion of “supernatural intervention” that envisages setting aside the laws of nature, but in terms of what is sometimes called a “causal joint” model. In this model, what is envisioned is a kind of divine manipulation of the laws of nature. (This manipulation is sometimes described as “noninterventionist” in a way that is potentially misleading [see Knight 2007, 26] since a kind of interference is still clearly envisaged.)

An important factor in the development of the causal joint model, in the form in which it is usually used within the science–theology dialogue, has been the way in which science itself changed significantly in the early twentieth century. Through the development of quantum mechanics, it moved from a deterministic model of causality to a nondeterministic one, in which it was recognized that only probabilities can be assigned to particular potential outcomes. This nondeterministic framework has seemed to many to allow God to respond to events in the world, not by setting aside the laws of nature, but by changing the probabilities involved in their operation. Some actually see quantum level indeterminacy as the site of the “causal joint” that allows God to do this, while others, like Peacocke and Polkinghorne, have suggested alternative sites that can also be spoken of in a scientifically literate way. However, these approaches have been criticized from a number of perspectives (Knight 2007, 22–27), and not least by Nicholas Saunders, who goes as far as to ask whether it would be correct to argue that, using the causal joint model, “the prospects for supporting anything like the ‘traditional understanding’ of God’s activity

in the world are extremely bleak?” To a large extent, he goes on, “the answer to this question must be yes” (Saunders 2002, 215).

A further critique of the causal joint understanding that is relevant from an Orthodox perspective is that made by Wesley Wildman. (He refers particularly to the approach of Robert John Russell, but his argument may also be applied to the model’s other advocates.) This is that the motivation for developing such a model is what Wildman calls “a personalistic theism of a distinctively modern kind . . . a distinctively Protestant deviation from the mainstream Christian view” (Wildman 2006, 166). For Wildman himself, an understanding of this “mainstream view” is perhaps biased towards traditional Western understandings, but a comparable critique can certainly also be made from an Orthodox perspective. For at the heart of the motivation for seeing a causal joint approach as necessary is a view of God’s “personhood” that is not only, as we have noted, at odds with Orthodoxy’s apophatic reluctance to apply to God a notion of personhood derived from experience of being human persons. It is in conflict also with the Orthodox understanding of God’s relationship to time, which is much closer to traditional Western understandings of God’s eternity—as found, for instance, in Aquinas—than it is to the scheme implicit in the causal joint model (and often explicitly defended by that model’s advocates): one in which a “temporal God” makes “responses” to situations in the world.

#### A REVIVED AND REVISED TELEOLOGY

Nicholas Saunders—perhaps at present the preeminent critic of the causal joint model—sees the failures of the current approaches to that model as having led to a situation in which “contemporary theology is in a crisis” (Saunders 2002, 215). This sense of crisis arises from the fact that he, like many, sees that model as being, in some form, necessary if we want to affirm the events usually attributed to “special” divine action. An alternative to this conceptual scheme is, however, available through the adoption of a different conceptual scheme that I have proposed on the basis of Orthodox theological perspectives (Knight 2007, 2009). This alternative scheme involves what might be called a revived and revised notion of teleology. What is advocated in this approach is not teleology of the kind rejected in the transition from medieval to modern science. Rather, it is something that arises from a convergence between scientific and theological perspectives, developed in a way that makes no attempt to trespass on modern science’s nonteleological explanations of mechanisms. There is thus, in this approach, no conflict with scientific perspectives as such, since what is involved is simply a theological interpretation of those perspectives.

One particular aspect of scientific understanding that is relevant here is the notion of evolutionary convergence. This notion has been popularized

by Simon Conway Morris, who in order to explain his understanding uses the notion of “attractors” in chaos theory. (These are not literal attractors, which exert an influence by some kind of force, but simply outcomes that are probable.) He has explored, in particular, the implications of the way in which, in particular ecological niches, certain functional solutions to the problems of survival have often arisen independently in different species through very different evolutionary pathways. On the basis of this observation, he has speculated that “an exploration of how evolution ‘navigates’ to particular functional solutions may provide the basis for a more general theory of biology. In essence, this approach posits the existence of something like ‘attractors,’ by which evolutionary trajectories are channeled towards stable nodes of functionality.” It is, he goes on, his suspicion “that such a research programme might reveal a deeper fabric in biology in which Darwinian evolution remains central as the agency, but the nodes of occupation are effectively determined from the Big Bang” (Conway Morris 2003, 309–10).

The teleological implications of Conway Morris’s approach are obvious provided that teleology is not understood in terms of some pre-ordained “end” that science needs to acknowledge as part of its explanatory framework. Rather, at the scientific level, this “end” (as it can be seen from a theological perspective) is understood simply in terms of probable outcomes that arise directly from factors that are explicable scientifically.

Comparable implications arise when we come to explore the way in which, as astrophysicists acknowledge, the universe seems to be “finely tuned” for the naturalistic emergence of living beings. There have, admittedly, been many ways in which the “anthropic cosmological principle” that arises from this fine tuning may be interpreted (see Barrow and Tipler 1986), and recent discussion has been further complicated by speculation about various kinds of “many universes” theory. Nevertheless, there remains a sense in which the evident fine tuning of our universe seems to some to pose questions to which “theism provides a persuasive (but not logically coercive) answer” (Polkinghorne 1991, 80). Moreover, even if this persuasiveness is perhaps less marked than these people believe, the fine tuning that is evident to the scientist is certainly consonant with a teleological understanding of the kind advocated here.

Such considerations suggest that we can speak about a universe which at one level—the scientific—“makes itself” naturalistically through the normal operation of the laws of nature, but which at a deeper, theological level may be seen as having a pre-programmed “goal”: the emergence of beings who can come to know the cosmos’s divine creator.

This teleological understanding, because of its focus on naturalistic processes, may at first sight seem to entail the kind of eighteenth-century deism in which it was assumed that the world was created by God “in

the beginning” and then left to “run on its own.” However, this is not a necessary consequence of this understanding, since God cannot be what has been called the “absentee landlord” of deistic belief in any framework in which (as the classic definition of *panentheism* puts it) “God is in everything and everything is in God.” If God is in everything, then God can hardly be absent from the world in the way assumed in deism. Thus, even if we were to do no more than arbitrarily to combine the teleological understanding that I have outlined with a panentheistic model of God’s relationship to the world, we would evade the charge of advocating a deistic understanding of the “absentee landlord” kind. However, what is important from the perspective of our present investigation is that this combination need not be arbitrary. Because of Orthodoxy’s way of using the fourth gospel’s notion of the divine *Logos* [Word], a combination of panentheistic and teleological understandings is in fact at the heart of its theology of creation.

#### THE DIVINE *LOGOS*

The New Testament notion of the divine *Logos* (John 1:1–14) has historical roots both in Greek philosophy and in the concept of Wisdom set out in Proverbs 8. The term *logos* (pl. *logoi*) is one that in the Greek of the New Testament has many nuances, witnessed to in its use as the root of the English term *logic*. However, these nuances are not evident in most translations of the prologue of the fourth gospel, which is perhaps why most Western Christians seem unaware of them. For Orthodox Christians, with their emphasis on early Greek-speaking writers, these nuances have implications for understanding, not only the person of Jesus Christ, but also the created order as a whole and in each of its parts. These implications were especially worked out in the seventh century by Maximos the Confessor (whose understanding might well, we should note, prove to be adoptable at least in part by those outside of the Christian tradition.)<sup>3</sup> Maximos spoke in detail about the *logoi* of created things, which were seen by him as being, in some sense, manifestations of the divine *Logos*, and thus as being uncreated rather than simply being part of the created order. In terms of this understanding, those who believe in the incarnation of the divine *Logos* in Jesus Christ are enabled to see their belief in a way that is unusual in much of Western Christianity, but normal in (or at least compatible with) Orthodoxy: as a belief in what has been called “almost a gradual incarnation” (Thunberg 1985, 75). In this understanding, the incarnation in Christ is not a supernatural intrusion into the created order so much as a process that has its beginning in the act of creation itself.

The teleological aspect of this understanding is brought out in many commentaries on Maximos. For example, Kallistos Ware has observed

that for Maximos “Christ the creator Logos has implanted in everything a characteristic logos, a ‘thought’ or ‘word’ which is God’s intention for that thing, its inner essence which makes it distinctively itself and at the same time draws it toward the divine realm.” (Ware 2004, 160). In a comparable way, Vladimir Lossky has commented that the Orthodox concept of the *logoi* of created things is such as to imply that the world, “created in order that it might be deified, is dynamic, tending always towards its final end” (Lossky, 1957, 101). These comments reflect the notion that we have already noted in relation to Panayiotis Nella’s analysis of patristic thought. This is that the divine *Logos* is not only that which is incarnate in Christ, but is also “that which organizes, seals and gives shape to matter, and which simultaneously attracts it towards itself” (Nellas, 1997, 33). Thus—especially in its exposition by those modern authors who stress the perspectives of Maximos the Confessor<sup>4</sup>—the Orthodox theology of creation sees the *logoi* of created things as manifesting both teleological and Christological components. For this reason I have dubbed it a *teleological-Christological* understanding (Knight 2005; 2007, 113–24). In this understanding, the laws of nature perceptible to the scientist may be seen, theologically, as one manifestation of the *logoi* of created things, but not necessarily the only one. As we shall see when we come to discuss “miraculous” events, there may be other “logical” or “law-like” aspects of the functioning of the *logoi* that are beyond the scientist’s perception, so that the kind of naturalism that we usually speak of may be seen as only a component of a deeper or “enhanced” naturalism that is not fully accessible to scientific investigation.

Related to this understanding of divine action are two other factors that set the Orthodox theology of creation apart from many Western Christian understandings. One is that for Orthodox theology there is no separation of grace and nature of the kind that medieval Western theologians (with the exception Duns Scotus) saw as almost axiomatic. As Lossky has put it, the Eastern tradition “knows nothing of ‘pure nature’ to which grace is added as a supernatural gift. For it, there is no natural or ‘normal’ state, since grace is implied by the act of creation itself” (Lossky, 1957, 101). The other is that Orthodox theology is, as I have noted, panentheistic, so that God is seen as being in everything, and everything is seen as being in God. This is evident not only from the way in which Maximos the Confessor speaks about the *logoi* of created things (Louth 2004) but also from the way in which Gregory Palamas, in a much later era, speaks about what he calls the divine energies (Ware 2004). When these factors are taken into account, it becomes clear that Orthodox theology sees divine action, not as occurring from “outside” of the cosmos, but as something intrinsic to the very nature of the created order. This is in contrast to the nonpanentheistic notion more usual in the Christian West: of action from “outside” the

cosmos, whether expressed explicitly in terms of supernatural intervention or implicitly in terms of the causal joint approach.<sup>5</sup>

### THE MIRACULOUS

At first sight, it might seem that while this teleological-Christological understanding can be applied to the physical and biological development of the cosmos, it cannot be applied to those events that we refer to as miraculous. However, three factors indicate that this first impression may be mistaken.

The first of these factors is that Eastern patristic writers tended to use the distinction between *uncreated* and *created* in situations in which Western writers were inclined to use the distinction between *supernatural* and *natural*. However, the borderline between the categories used was not the same in the two cases. Thus, for example, in Western writing angels were seen as falling on the same side of the natural-supernatural divide as God does, while, in terms of the Eastern distinction between uncreated and created, they were seen as falling into the other side of the divide to that which is appropriate to God. This Eastern usage is due partly to Orthodox theology's strong sense of what Elizabeth Theokritoff (2008, 65) has called "solidarity in createdness," and partly to the way in which, as Dimitru Staniloae (1968, 1) has put it, "the Orthodox Church makes no separation between natural and supernatural revelation."<sup>6</sup> Moreover, when Eastern patristic writers did at times use the term *hyper physis*—meaning literally "above nature" but usually translated as *supernatural*—what they envisaged was something subtly different to what Western authors usually mean when they speak of supernatural events. Because, for Orthodoxy, there is no "pure nature" to which grace is added as a supernatural gift, events that are "above nature" are not seen as supernatural in the technical Western sense. In certain respects, therefore, the term *hyper physis* might be better translated as *paranormal*.

The second factor to be taken into account, when we consider events usually thought of as "supernatural," is that patristic perspectives occasionally point towards an understanding of miracles, not in terms of natural laws being set aside, but in terms of what we might call "higher laws of nature" becoming operative. (This has particularly been commented on in relation to Augustine of Hippo.) An interesting point here is that this kind of understanding manifests evident parallels with a trend in the current science–theology dialogue, which has led some to speak of miracles as analogous to regime change in the natural world (Polkinghorne 1986, 74), and others to speak of an "instantiation of a new law of nature" (Russell 2002). This kind of understanding, I have argued (Knight 2007, 30, 34–9), enables us to articulate a kind of enhanced naturalism within which the possibility of paranormal events may be affirmed, especially if certain

“new emergent” properties of humanity are seen as a significant factor in paranormal causality.

The third factor to be taken into account is, however, perhaps the most important. This is that Orthodox theology has not only a teleological-Christological framework but also a strong eschatological sense, so that it perceives two transformations in the created order. The first of these transformations is associated with the biblical notion of the “fall”—the expulsion from Eden. (This was not always seen by the church Fathers as a historical event but instead—especially for those in the Origenist tradition—as in some sense meta-historical.) The second transformation is the coming eschatological transformation, in which the “world to come” will be experienced in its fullness. In the patristic expression of it, this belief that the present state of the world lies between two other states is often articulated in terms of an allegorical interpretation of the “garments of skin” given to the humans expelled from Eden (Genesis 3:21), which are taken to refer to “the entire postlapsarian psychosomatic clothing of the human person” (Nellas 1997, 50, n. 92). These garments of skin (and their cosmic accompaniments) are not seen as “natural” in the sense of what God originally intended or ultimately intends. Rather, the world as we now usually experience it is seen as being in some sense unnatural (Nellas 1997, 44) or—perhaps better—subnatural (Knight 2007, 86–95, 2008).

In terms of this understanding, what we perceive as miraculous may be seen as an anticipation of our restoration to a “natural” state from our present “subnatural” one. This sense that our experience is sometimes of this restorative kind has perhaps been most explicitly explored by Orthodox authors in relation to the sacramental mysteries (e.g., Sherrard 1964). However, it is often implicit in Orthodox commentary on miracles as well. In terms of this understanding we can, for example, see with a new clarity how the eschatological state, in which “the wolf shall lie down with the lamb and the leopard shall lie down with the kid” (Is. 11:6), is anticipated in the stories of “miraculous” friendship between wild animals and saints such as Francis of Assisi, Seraphim of Sarov, and Cuthbert of Lindisfarne. That which is “above nature” is, in this perspective, simply that which is in accordance with a *truly* natural state. The state that it is “above” is only our present *subnatural* one.

#### THE INTERACTION OF EAST AND WEST

Some Orthodox writers have wondered whether the work of the Reformed theologian Thomas F. Torrance might provide a good starting point for attempting a convergence of Eastern and Western Christian perspectives on the interaction of science and theology. Given Torrance’s combination of scientific literacy and attentiveness to the Eastern patristic (and especially Alexandrian) tradition, it is easy to see why his approach seems attractive

to them. However, while Torrance certainly offers important insights, his overall framework might be less in accord with Orthodox perspectives than appears at first sight.<sup>7</sup>

As an alternative to Torrance's perspectives, another approach is available, which draws on many of the same Eastern patristic resources. This approach has been implicitly suggested in what I have written here, as it has also (in a more detailed but slightly different way) in my book *The God of Nature* (Knight 2007). This approach will be more explicitly set out and expanded in a book in preparation, which will explore my belief that an Orthodox critique of the mainstream science–theology dialogue can lead to the development of a scientifically-informed theology of creation that incorporates not only major Orthodox perspectives but also a coherent approach to divine action.

This approach will be based on a three-pronged strategy. It will involve:

- (i) a teleological interpretation of scientific insights of the kind I have outlined;
- (ii) an enhanced naturalism that allows for paranormal events, of the kind I have noted as characteristic of at least some patristic and modern thinking; and
- (iii) expansion of what has often been called the “cosmic vision” of Maximos the Confessor, with its panentheistic and teleological-Christological core.

There will, almost inevitably, be those in the Orthodox world who—because of their stress on the Orthodox “Tradition” (with a capital T)—will be wary of the openness of this proposed strategy to modern scientific understandings and to Western Christian reflections. However, such people often fail to recognize that the Orthodox notion of Tradition is, at its best, always forward-looking and able to receive valid new insights, whatever their origin may be. As Timothy Ware (Metropolitan Kallistos of Diokleia) has put it, “Loyalty to Tradition, properly understood, is not something mechanical, a passive and automatic process of transmitting the accepted wisdom of an era in the distant past. An Orthodox thinker must see Tradition from within, he must enter into its inner spirit, he must re-experience the meaning of Tradition in a manner that is exploratory, courageous, and full of imaginative creativity. . . . The Orthodox concept of Tradition is not static but dynamic, not a dead acceptance of the past but a living discovery of the Holy Spirit in the present. Tradition, while inwardly changeless . . . is constantly assuming new forms, which supplement the old without superseding them” (Ware 1993, 198). He makes comments, too, on the role of Western Christian insights in this process. “If we Orthodox are to fulfil our role properly,” he says, “we must understand our own Tradition better than we have in the past, and it is the West . . . that can help us do

this. We Orthodox must thank our younger brothers, for through contact with Christians of the West we are being enabled to acquire a new vision of Orthodoxy” (Ware 1993, 326).

The critiques and proposals outlined here will not, however, be relevant only to discussion among Orthodox Christians about developing a deeper understanding of their Tradition. Already, among Western Christian theologians, there are indications of a growing disillusionment with much of the traditional Western notion of God’s relationship to the world and with the models of divine action that have arisen within that inherited framework. In particular, two developments stand out as worthy of note. One is that there have been a number of recent attempts to develop a pantheistic understanding comparable to that of the Orthodox approach (see e.g., the essays in Clayton and Peacocke 2004). The other is that there has been an attempt to use scientific perspectives to understand divine action in a way that uses the Western scholastic conception of primary and secondary causation but also—like the approach outlined in this article—transcends the old Western distinction between general and special modes of divine action (Edwards 2010). It seems at least possible, therefore, that Western and Eastern understandings are beginning to converge, and that an Orthodox critique of the mainstream science–theology dialogue might be helpful in allowing that convergence to continue.

## NOTES

1. We should perhaps note that while Lossky’s interpretation has been a major influence in Orthodox theology over the last two or three generations, this influence has not been uniform. Within the science–theology dialogue, for example, Alexei Nesteruk seems to work with a less radical apophaticism than that advocated by Lossky (and assumed in this article). More generally, we should note that Lossky’s perspectives have perhaps been more influential in the Slav strand of Orthodoxy than in the Greek.

2. This understanding, Lossky notes, is based in part on the kind of approach evident in Gregory of Nyssa, for whom the concepts we form “in accordance with the understanding and the judgment which are natural to us, basing ourselves on an intelligible representation, create idols of God instead of revealing to us God Himself” (Lossky 1957, 33). In this understanding, the terms that we apply to God in cataphatic theology “are not rational notions which we formulate, the concepts with which our intellect constructs a positive science of the divine nature.” Rather, they are “images or ideas intended to guide us and fit our faculties for the contemplation of that which passes all understanding” (Lossky 1957, 40).

3. Because Maximos speaks of created things in the way that he does, his view of the cosmos might potentially be adoptable by theists who use the concept of the divine *Logos*—or something comparable to it—in a way that makes no reference to the Christian notion of the incarnation. It is notable, for example, that within the Islamic world some strands of Sufi belief use the notion of the divine *Logos*, while the Taoist use of the concept of the *eternal way* also has parallels with this notion.

4. The influence of Maximos among Orthodox theological writers seems to have increased considerably over the last century or so. Indeed, it sometimes seems that Orthodox theology in the early twenty-first century has become so strongly Maximian that the terms Maximian and “modern Orthodox” may almost be equated. This Maximian influence is not uniform, however, and we certainly need to be cautious in seeing him as representative of all Orthodox writing in all ages. Recent writings on Maximos by Orthodox authors includes books by Louth (1996)

and Loudovikos (2010), while interesting works on him by Western writers (who have taken an increasing interest in him) include those by von Balthasar (1993) and Thunberg (1995).

5. The causal joint approach is, admittedly, occasionally expressed in panentheistic terms, but this expression is arguably incoherent because the very notion of a causal joint is based on the assumption that God is “outside” the universe and therefore needs some way of “getting in” to it. Because of this, Polkinghorne’s combination of anti-panentheism and a causal joint model may be seen as being more coherent than those versions of the model in which panentheism is affirmed but in fact constitutes little more than a kind of ill-fitting “bolt-on extra” (see Knight 2004).

6. Staniloae—who does sometimes use the term *supernatural*—arguably softens the outlook on which he bases this statement: that of the seventh-century author Maximos the Confessor, in which, as Staniloae puts it, there is no “essential distinction between natural revelation and the supernatural or biblical one . . . the latter is only the embodying of the former in historical persons and actions” (Staniloae 1968,1). This means, among other things, that Orthodoxy has a distinctive form of natural theology (see Knight 2013a).

7. Two factors seem relevant here. One is that Torrance fails to recognize what Orthodoxy sees as the complementarity of different patristic perspectives. (He tends, for example, to see contradictions between the Alexandrian theology that he advocates and the Cappadocians’ approach, of which he is in certain respects critical.) The second factor, however, is a more important one that I have commented on elsewhere. “If Torrance’s work reflects a love for Eastern patristic authors like Athanasius,” I noted, “it also reflects his love of Calvin.” Noting his avoidance of all forms of panentheism (Molnar 2009, 139), I went on to make the following comment: “Torrance’s stress on the sovereignty of God leads him to eschew all forms of panentheism in a way that is arguably in tension with those major strands of Orthodox thinking which . . . manifest a strong panentheistic tendency. Moreover, despite his tilting at the kind of ‘deistic disjunction between God and the world’ that he sees in the traditions of natural theology that he rejects, Torrance arguably manifests another kind of dualism that the Orthodox tradition avoids: one that in certain contexts stresses the transcendence of God so strongly that divine immanence is effectively ignored and is certainly devalued” (Knight 2013b, 41–42).

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