George L. Murphy

Necessary Natural Evil and Inevitable Moral Evil

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The question of why bad things happen to creatures of a supposedly beneficent and all-powerful God has been a challenge to Christian thought in modern times. Scientific knowledge makes an appeal to effects of a primordial human sin a very unconvincing response. Here we distinguish between natural and moral evil and proceed on the basis of a theology of the cross. The hiddenness of God's activity in the world suggests that God has given creation its own functional integrity, so that God will not intervene miraculously to avert all danger from creatures. Thus natural evil is, in a sense, necessary. In addition, evolution of intelligent life will result in creatures who, in theory, could trust and obey God but who will inevitably fail to do so. God shares with creation in paying the price for creation of such a world by choosing to be vulnerable to its suffering.

A fundamental aspect of the Christian doctrine of creation is set out in the first creation account of Genesis (1:1–2:4a). This text repeatedly states that aspects of the world which God created are "good," and the story of God's work concludes by saying that God saw everything that he had made to be "very good." First Timothy 4:4a affirms this: "For everything created by God is good, and nothing is to be rejected."

The Issues

Human experience of bad things happening in the world—the sufferings caused by disease, storms, and fatal accidents along with the harm that people do to one another by their choices—immediately raises questions about this claim of creation's goodness. Is the way creation is described in the Genesis account consistent with these realities?

And there are further questions. The Bible pictures God's ongoing involvement with creation after the initial creation. We are not given a deistic picture of a clockmaker God who once created the cosmic machinery and then lets it run on its own, but of a creator who is active in the world that he created. In fact, the picture is not just of sporadic divine interventions in the world but of a God who is involved in everything that happens. Creation includes both the originating *creatio ex nihilo* and the ongoing *creatio continua*. Does this then mean that God not only created a world in which bad things take place, but that he also actually causes those things to happen?

It is now common to distinguish between "natural evil" and "moral evil." The first includes all the bad things that can happen to creatures in the natural world, such as diseases, storms, earthquakes, and attacks by animals, as well as smaller accidents such as tripping and falling. These things happen, not because some moral agent intends harm to another

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-person but because they are simply "out there" in the world. They affect not just humans but other animals as well, and, in fact, even the inanimate and inorganic features of the world. Natural evil, in the last analysis, infects all of nature.

"Moral evil," on the other hand, includes all the bad things that we, as rational animals, do. We can damage or destroy other humans, nonhuman animals, and, as the rise of ecological awareness in the past century has shown us, inanimate and inorganic parts of creation. These things do not "just happen," but they take place because people want them to happen, allow them to happen by culpable negligence, or bring them about as collateral damage in the process of getting what they want.

While it is helpful to distinguish between these two types of evil, we need to remember that in some cases both the forces of nature and human action or inaction combine to bring about evil effects. The problems caused by climate change, for example, are due in part to human activity and are exacerbated by denial of the problem by some people in positions of power. The assassination of Abraham Lincoln could not have taken place if the natural processes of an explosion exerting a force on a projectile in a gun had not functioned.

For about the first sixteen hundred years of the Christian era, it seemed easy to explain why bad things happen. As the third chapter of Genesis tells the story, Eve and Adam chose to disobey God and became sinners. This came to be seen in the Christian tradition as something that affected not only all their descendants but nature as well. There was thought to be a straightforward causal connection between the fall of humanity, which brought moral evil into the world, and a cosmic fall which brought natural evil. Acceptance of this connection meant that disease, storms, and other dangers of the natural world, while troubling, were not a theological puzzle. Thus there was not much need of theodicy, an attempt to reconcile belief in divine justice and beneficence with the experience of evil in the world.

This began to change with the rise of modern science and the Enlightenment with its openness to questioning of traditional beliefs. A catastrophe like the Lisbon earthquake of 1755, in which tens of thousands of people died, raised obvious questions about divine justice, even for those who held to the idea of a cosmic fall. Biblical criticism and the scientific study of human origins challenged belief in the historical accuracy of the Genesis accounts of the creation of humanity and its Fall. While older discussions of evil by Augustine, Leibniz, Voltaire, and others are of value, we need to look at the topic here with particular attention to both theological and scientific concerns.[1]

The Genesis accounts of creation and of the earliest human sins continue, of course, to be essential theological statements about the world and the human condition. But critical biblical scholarship indicates that we cannot consider them to be straightforward "history as it really happened."[2] And what we know of human evolution requires that we reconsider traditional ideas about human origins. In particular, genetic evidence now points very strongly to a minimum human population of at least 5,000 individuals at any time in history.[3] Thus a primordial sin by a single couple who were the ancestors of all of us can no longer be maintained as historical fact.

What Genesis says about human sin as refusal to trust and obey God, and the consequences of sin in destroying relations with God, other humans, and the natural world continues to be true. A doctrine of original sin, in the sense that all people begin life in a sinful condition (technically, "original sin originated"), can still be maintained.[4] But since the first humans were the product of a long evolutionary history that in some ways would have encouraged competitive and selfish behaviors, the idea of an initial state of "original righteousness" is implausible. Thus modification of the idea of a historically first sin ("original sin originating") is needed, and the traditional explanation for moral evil needs revision.

There is abundant evidence that there were creatures, including our prehuman ancestors, who were living, suffering, and dying, for millions of years before humans came on the scene. Thus a direct attribution of natural evil to the effects of human sin is highly implausible. From the beginning, the universe had the potential for these things to happen. God apparently created a world in which creatures would suffer and die, and in which some of that suffering and death could be caused by the choices of morally responsible beings. We have noted that there are connections between natural evil and moral evil, but the former cannot be seen as an immediate cause of the latter.

My relatively modest goal here is to provide some understanding, in light of the Christian faith, of why these evils should exist. I make no claim of a complete explanation, for there is a senseless aspect of evil, of what has been called "a mythopoeic lie."[5] In addition, I am not attempting to give a justification for the reality of evil on the basis of philosophical arguments or natural theology, but I am presenting an explicitly Christian theological argument. Our task will require discussion of some important theological topics before we address the issues of natural and moral evil explicitly.

The God Who Acts in the World

The long history of the world's natural catastrophes and the considerable amount of truth in Gibbon's characterization of human history as "little more than the register of the crimes, follies, and misfortunes of mankind"[6] raise obvious questions about the claim that all creation is good. Attempting to answer these questions has been the task of theodicy, an effort to, in Milton's phrase from the beginning of *Paradise Lost*, "justify the ways of God to men."

But who is this God whose ways are to be justified? The influence of Hellenistic philosophy on the development of Christian theology has meant that for much of Christian history God was thought to be absolutely immutable and impassible, unable to be influenced by anything that happens in the world. God could and did act in the world, but there could be no "back reaction" of the world upon God. In particular, God could not be brought to suffer by anything that creatures do. Thus, in any discussion of suffering that took place in the world, God was exempt.

A few of the church fathers did express different views.[7] Perhaps the most interesting is the third-century bishop Gregory Thaumaturgus, who argued that there is a sense in which the impassible God can be passible.[8] God indeed cannot be forced to suffer contrary to the divine will, but God can *choose* to be affected by some other agent. This means that God could choose to share in the sufferings of creatures.

But the most significant move in this direction is Martin Luther's theology of the cross, set out in his theses for the Heidelberg Disputation of 1518. Here Luther distinguished between two types of theologians. The first is the theologian of glory.

> That person does not deserve to be called a theologian who looks upon the invisible things of God as though they were clearly perceptible in those things that have actually happened (or have been made, created).[9]

What is in view here is a claim to know who God is (and not just that there is a God) from knowledge of the world. A comparison of Luther's Latin text of this thesis with the Vulgate shows that he is referring to Paul's words in Romans 1:20. As Paul goes on to argue in Romans, people misunderstand evidence of God in the world and construct idols. They may be the kinds of visible images that Paul mentions, but they can also be more subtle projections of the kind of God we would be if we were God. And since we would rather not suffer, it is easy for us come to the idea of a God who is absolutely impassible.

The theologian of the cross, on the other hand, while not ignoring the world, starts at a different place, Golgotha.

> That person deserves to be called a theologian, however, who comprehends the visible and manifest things of God seen through suffering and the cross.[10]

Luther then says in his argument for this thesis, "For this reason true theology and recognition of God are in the crucified Christ."[11] That is where knowledge of God should begin. We may then look for the presence and activity of this God in the world, knowing that the God we seek is the one revealed most fully in the crucified and risen One.

Luther held formally to the traditional idea of divine immutability and impassibility. "God in his own nature cannot die,"[12] but the union of divine and human natures in the Second Person of the Trinity meant that suffering and death could be attributed to that person. Luther pushed these ideas to their limit, speaking of "a dead God,"[13] and a Lutheran Good Friday hymn of the seventeenth century could say "God himself lies dead."[14]

These ideas were taken up in the twentieth century by several theologians. Kazoh Kitamori wrote about "the pain of God," while Eberhard Jüngel spoke of God's unity with perishability revealed in the cross,

and Jürgen Moltmann distinguished between a simplistic idea of a "death of God" and "death in God," God taking the experience of death into Godself.[15] The claim that God can choose to share in the suffering of creatures and, in fact, does so will be accepted in the following discussion.

How then should we think of this God acting in the world? A number of different theologies and models of divine action have been proposed.[16] If God is indeed most fully known in the crucified Christ, then it makes sense to think of divine action in the world as having the pattern that we see in Christ.[17]

We begin with the belief that God is active in the world, and we can use a quite traditional idea to speak of this. God works with creatures, cooperating with them in their actions, so that both God and creatures are causes of everything that happens. This can be described in scholastic terms as the Primary Cause acting through secondary causes. In more picturesque terms we can say that God works with creatures as a human worker does with tools.

It is important to understand that what is presented in the previous paragraph is an analogy. God is not an entity within the world on the same level as other entities, and the "cooperation"—literally, "working with"—of God and created things cannot be described in the same way as the interaction of a charged particle and an electromagnetic field can be described. Theology is not physics. And while God does not make use of intelligent agents in the way that a mechanic uses a screwdriver, language like that in a prayer attributed to St. Francis, "Make me an instrument of your peace," is not uncommon in the Christian tradition.

But the regularity of natural processes which makes possible the successes of scientific study shows that God does not use these tools in arbitrary ways. (We should not, however, rule out rare instances of divine action that do not accord with our laws of physics. These are best understood as God's use of possibilities inherent in the basic pattern of creation that we have not yet discovered.[18]) Our experience shows us that, if we are to speak of God acting in the world, we have to say that God normally acts in accord with patterns that we try to approximate by our laws of physics. In other words, God limits activity to what is within the capacity of created things.

In doing this, God conforms activity in the world to what is revealed in Christ, who "emptied *(ekenōsen)* himself, taking the form of a slave, being born in human likeness" (Phil. 2:7). This "emptying," or kenosis, means that the one who "was in the form of God" (Phil. 2:5) limited himself to the conditions of existence of a human in a particular time and place and culture. God's limitation of divine action to the capacities of creatures has this same character. Just as God seems to be absent in the event of the cross—for nothing looks less like our ideas of God than a man dying a humiliating and painful death—God's action in the world is hidden from scientific investigation. What we observe is not God but the instruments that God uses.

Kenosis does not mean that God is absent or inactive in some situations. God is everywhere present and working, but limits that work to the capacities of creatures. Thus the integrity of creatures is respected and scientific study of the world is made possible. This does, however, have a dark side which we need to consider.

The Goal of Creation

What does God intend to accomplish with all this work? Science, which gives us detailed knowledge of how things behave in the universe, can tell us nothing about any ultimate purpose or goal or "point" to it all. If God's activity in creation is hidden from scientific observation, it is hardly surprising if the goal of that activity is also concealed. Yet we can speak about it theologically.[19]

Scripture does not go into detail about God's plan for creation, but it is not entirely silent. There is a significant hint in the first creation story. There the creation and blessing of humanity on the sixth day are very important but the story is not finished at that point. This is clear from the commands to "be fruitful and multiply" and "subdue" the earth, commands that would make no sense if everything were in a perfect condition. Creation is intended to develop in the course of time.

The conclusion of the story is the seventh day and God's rest "from all the work that he had done" (Gen. 2:2). This does not mean that God has been idle ever since—Jesus reminded his hearers that

"My Father is still working, and I also am working" (John 5:17). It points instead to the ultimate fulfillment of creation, the Great Sabbath.[20] The Sabbath is a weekly reminder of that future when all things will be as God intended. That is why stories about Jesus healing people on the Sabbath play an important role in the gospels—it is precisely the right time for such things to take place.[21] They are signs that God's final future was breaking into history.

When we look at current scientific knowledge about the history of the universe and of the earth and life on it, we find a picture that is consistent with the idea of a creation intended to evolve.[22] The way in which this development takes place, however, seems to be a major cause of the evils that we have discussed, something that may be disquieting.

Thus we need to look at a second biblical way of talking about God's purpose for creation. Ephesians 1:10 speaks of God's "plan for the fullness of time, to gather up all things in him [Christ], things in heaven and things on earth." Pointing in the same direction is the Christ hymn of Colossians (1:15–20) in which "all things" are said to have been created "for him." Since in this latter text the reconciliation of all things with God is brought about through the cross (v. 20), it is clear that the emphasis is on the incarnate Christ, the Son of God who became a participant in the evolutionary process and, siding with outcasts and the oppressed, got killed as a result.

The cross of Christ is where we see most clearly the suffering of God with creation, but it is not the only place in the biblical story in which this is seen. In the flood story, for example, we are told that when God saw the wicked behavior of humans, "it grieved him to his heart" (Gen. 6:6). It is quite arbitrary to dismiss such biblical statements as figurative while insisting that the few texts that speak of divine immutability be taken as strictly literal.

The Necessity of Natural Evil

Natural evil—that creatures should suffer pain, loss, and death simply because of the operation of physical processes in the world and not because of any choices by other creatures who are moral agents—is not necessary in the sense that such things would have to happen no matter what. If A is true then B necessarily follows—but A need not be true. If you are going to cook dinner in your kitchen, it is necessary to turn on the stove—but you could eat your food raw. If you drop a ball, it will fall to the floor—but you do not have to drop it.

God would not have had to create a world at all. God could have made a world of particles obeying Newton's laws of motion in which living things would not have come into being. The creator could have brought into being the kind of perfect world that "young earth creationists" imagine—a world intended to remain static, for what is perfect could only change for the worse. Or God could intervene in our world every time there was a possibility of a creature coming to harm. But the world we inhabit is obviously not like any of those.

The fact that we can understand the development of the universe from the big bang onward, geophysical history and biological evolution in terms of natural processes, without reference to God, means (always within the context of Christian faith) that God has created a world with its own "functional integrity"[23] that can develop in relative autonomy. Things that happen in the world take place with divine cooperation, but the world is not simply an extension of God. For, as Athanasius wrote,

> God is good, or rather is essentially the source of goodness: nor could one that is good be niggardly of anything: whence, grudging existence to none, He has made all things out of nothing by His own Word, Jesus Christ our Lord.[24]

The fact that God allows creation to "be itself," acting in accord with the properties with which he has endowed created things and their patterns of interaction by virtue of the kenotic limitation of divine action, is what makes the world comprehensible to rational minds. By working in this way, God allows us to live in the world as adults, able to understand the world on its own terms and to make plans for the future. And the regularity of natural processes that results from the limitation of divine action to the rational patterns God has established is what makes scientific understanding of the world possible.

Lest this sound too anthropocentric, we should realize that other creatures depend on regularities—which plants are good to eat and which are not, prey and predator habits, and so forth—in order to survive. It does not matter that animals may have no intellectual understanding of these regularities.

If a plant were nutritious one day and poisonous the next, some herbivores would be in trouble.

So there are certainly beneficial aspects of the limited way in which God works in creation. But there is a dark side to it as well. Bad things happen to creatures, and God does not act in violation of what we describe as the laws of physics to stop them. Earthquakes and volcanoes result from the dynamics of the earth's tectonic plates and upper mantle. The development of life on earth and its evolution through natural selection have given rise to infectious organisms and predator-prey relationships. The mechanics and thermodynamics of the planet's atmosphere produce violent storms. All of these phenomena and more can mean suffering and death for living things.

Particular storms, development of cancers, and other natural evils would not have to happen. Their origins lie in the realm of chaotic phenomena whose consequences do not follow in a deterministic manner—the butterfly effect in connection with the weather is a classic example. Chaos theory tells us that there is some flexibility in the linkage between events, and God has some freedom to determine the course of action without any "violation" of the laws of physics. But in an evolving biosphere on a dynamic planet, some cancers, some storms, and some earthquakes will occur. As a consequence of the way God has chosen for creation to move toward its goal, natural evil is necessary. It is part of the natural world that we inhabit.

The fact that creation has been given freedom to develop in accord with the character with which God has endowed it has been called by John Polkinghorne "the free process defense" against criticisms for the natural evil that occurs in the world.[25] This is a parallel to the way in which human freedom to choose has often been used to justify the creation of a world in which moral evil is a possibility.

That is certainly not a proof, in any strict sense, that God is justified in creating such a world, and whether or not it will be a convincing apologetic argument will depend on the interests and concerns of those to whom it is addressed. In any case, the free process defense is best presented in connection with a theology of the cross. There is a price to be paid for the freedom of creation, and God shares in paying that price.

The Creator is not an absolute monarch who forces creatures through millions of years of struggle, suffering, and dying without being affected by those things. Instead, the one through whom all things were created "was made flesh," and became a participant in creation to the extent of suffering and dying a painful death. ("Flesh," *sarx*, is a way that the Bible often refers to humans in their weakness and vulnerability.)

The passion and death of Jesus Christ, and indeed his whole life of sharing in the human condition, was more than God's temporary stratagem. If, as Luther said, "true theology and recognition of God are in the crucified Christ," then the passion shows us the character and typical *modus operandi* of the divine. God did not first feel the world's pains when Jesus was nailed to the cross. "The compassion of human beings is for their neighbors," the Book of Sirach (18:13) says, "But the compassion of the Lord is for every living thing."

We can even suggest that God would not have created the kind of universe we inhabit without intending to share in its sufferings and eventually to become a participant in it. Surely God knew the kinds of things that could happen in a world given freedom to develop! Ninian Smart and Steven Konstantine express this in untraditional language as part of their enterprise of using concepts of other world religions to present a Christian theology:

> But the Christian God is not a blissful God, or rather she is not a wholly blissful God. There is always the thought of the bodhisattva: that we cannot remain purely happy knowing that other beings suffer. We cannot be happy until all are happy. That bodhisattva sentiment would itself cast a shadow on the light of bliss. It therefore figures that the Bodhisattva God would not create a cosmos, however glorious, unless she herself were willing to suffer: and that would mean entering this very cosmos. So theism already impels us towards that vision of the suffering servant.[26]

This is already implied in two New Testament texts. First Peter 1:19–20 and Revelation 13:8 speak of Christ as the sacrificial lamb destined (respectively) before or from "the foundation of the world."[27] Not only the incarnation but also the cross was part of God's plan from the beginning.

The Inevitability of Moral Evil

Things change when moral agents, humans, come into being through the evolutionary process. But before we consider moral evil, we should note two things about this transition.

To begin with, we should remember that while we are often concerned with the evil effects that our choices can have on other creatures, moral agency should be understood in the context of what we may call theological agency. Sin is, first of all, a matter of relationship with God rather than with other creatures. That is why the First Commandment comes first and is the way Paul speaks about the problem of sin in Romans 1: Failure to acknowledge God as creator has as its consequence all the bad things people do to one another.

In addition, humans are still part of the natural world. Things that operate according to the laws of physics, our brains, are involved in the choices we make—whether moral, immoral, or indifferent. And whatever our views on free will may be, the physical operations of our brains, like all other things that happen in the world, take place with divine cooperation.

The question with which we have to deal here is, why did the earliest humans, hominids who had become theological and moral agents, choose to behave in sinful and immoral ways? Was this really just another example of natural evil, something written into our DNA as a result of natural selection?

The ancestors of those first humans would have been members of their species who were most successful in competition with others for food, breeding opportunities, escape from predators, and other survival needs. They could not be called "immoral" because they killed, deceived, were sexually promiscuous, and did other things that would be wrong for their human descendants. But the first humans would have had strong propensities for the same types of behavior because those behaviors had made possible many generations of evolutionary success. That is how natural selection works, and while natural selection is not the whole story of evolution, it is at least a significant part of it.

This is not purely theoretical. Studies of our closest primate relatives show that they behave in ways that are consistent with what natural selection leads us to expect.[28] There are many examples of cooperative behavior among other primates but also many examples of actions that would be considered immoral if humans did them.

We can think of the first humans as at the beginning of a road along which God wants to lead them and their descendants to fully mature humanity and complete fellowship with God. In principle, they can follow that road but it will not be easy. They have inherited traits that enabled their ancestors to survive and pass on their genes, traits that tend to produce behaviors beneficial for the individual and close relatives rather than for the larger community God intends. (In the following, I will simply call such behavior "selfish.") As evolutionary biologist Ernst Mayr put it bluntly, "Altruism toward strangers is a behavior not supported by natural selection."[29]

But selfish behaviors were not hardwired into genes because, in spite of some popular expositions, behaviors are not coded for that directly in DNA. Even language of a gene for some physical condition such as cancer is inaccurate because what is involved is generally a gene whose presence means that there is an increased probability of the disease. Inherited tendencies toward selfish behavior would, however, have been very strong. Although today our hereditary tendencies for these behaviors are often augmented by cultural conditioning to "look out for number one," we are not compelled to act in accord with those tendencies. "My genes made me do it" is always an overstatement.

Nevertheless, tendencies toward immoral and sinful behavior would have been very strong for the first humans, and in the course of time, the chances of always resisting temptation would have become increasingly slight. In the language of Reinhold Niebuhr, sin was not "necessary" but it was "inevitable."[30]

This distinction may seem slight but it is important both for scientific and for theological reasons. In the first place, it keeps us from being beguiled by the "gene myth,"[31] the idea of strict genetic determinism. In addition, while God certainly knew that sin would indeed be inevitable in the kind of world he created, sin cannot be attributed directly to God.

The inevitable sins of the earliest humans eventually resulted in a situation in which all people from birth

would live in a culture of estrangement from God. That culture, together with continuing hereditary tendencies toward selfish behavior, is responsible for the universal problem of sin, and is the reason why God needed to act to save us in Jesus Christ. An understanding of the atoning work of Christ that coheres with the evolutionary picture that has been sketched is not our task here, but I have dealt with the subject in another place.[32] It must suffice to say that the central feature of God's work of new creation, turning creation back toward the goal God intends, is the destruction of idolatrous faith and creation of genuine faith in the true God through the death and resurrection of God incarnate. ✞

Notes

[1]A collection of writings on the subject by authors ranging from Plato to the twentieth century is Mark Larrimore, ed., *The Problem of Evil: A Reader* (Malden, MA: Blackwell, 2001).

[2]E.g., Gerhard von Rad, *Genesis: A Commentary*, rev. ed. (Philadelphia, PA: Westminster, 1972); Claus Westermann, *Genesis 1–11: A Commentary* (Minneapolis, MN: Augsburg Fortress, 1984).

[3]E.g., David Wilcox, "Finding Adam: The Genetics of Human Origins," in *Perspectives on an Evolving Creation*, ed. Keith B. Miller (Grand Rapids, MI: Wm. B. Eerdmans, 2003), 250–52; Dennis Venema and Darrel Falk, "Does Genetics Point to a Single Primal Couple?," blog entry, April 5, 2010, *Biologos,* http://biologos.org/blog/does-genetics-point-to-a-single-primal-couple#.

[4]George L. Murphy, *Models of Atonement: Speaking about Salvation in a Scientific World* (Minneapolis, MN: Lutheran University Press, 2013), chapter 4.

[5]F. Staudenmeier, "*eine dichtende Lüge,*" quoted in Georges Florovsky, *Creation and Redemption,* vol. 3 of Collected Works of Georges Florovsky (Belmont, MA: Nordland, 1976), 50.

[6]Edward Gibbon, *The Decline and Fall of the Roman Empire*, vol. 1 (New York: Random House, n.d.), 69.

[7]Joseph M. Hallman, *The Descent of God: Divine Suffering in History and Theology* (Minneapolis, MN: Augsburg Fortress, 1991).

[8]Gregory Thaumaturgus, "To Theopompus, on the Impassibility and Passibility of God," in *The Fathers of the Church*, vol. 98 (Washington, DC: The Catholic University of America Press, 1998), 152–73.

[9]The Heidelberg theses are found in *Luther's Works* 31 (Philadelphia, PA: Fortress Press, 1957), 37–70. I quote from Gerhard O. Forde, *On Being a Theologian of the Cross: Reflections on Luther Heidelberg Disputation, 1518* (Grand Rapids, MI: Wm. B. Eerdmans, 1997), 72.

[10]Ibid., 77.

[11]Ibid., 80.

[12]Martin Luther, "On the Councils and the Church," in *Luther's Works*, vol. 41 (Philadelphia, PA: Fortress Press, 1966), 104.

[13]Ibid., 103.

[14]For discussion see Eberhard Jüngel, *God as the Mystery of the World: On the Foundation of the Theology of the Crucified One in the Dispute between Theism and Atheism* (Grand Rapids, MI: Wm. B. Eerdmans, 1983), 64.

[15]Kazoh Kitamori, *Theology of the Pain of God* (Richmond, VA: John Knox Press, 1963); Jüngel, *God as the Mystery of the World*; Jürgen Moltmann, *The Crucified God: The Cross of Christ as the Foundation and Criticism of Christian Theology* (New York: Harper & Row, 1974).

[16]For a survey of views of divine action, see Ian G. Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco, CA: HarperCollins, 1997), chapter 12.

[17]For the following, see George L. Murphy, "God's Action in the World," chap. 6 in *The Cosmos in the Light of the Cross* (Harrisburg, PA: Trinity Press International, 2003), 74–92.

[18]Ibid., 88–91.

[19]George L. Murphy, "Divine Action and Divine Purpose," *Currents in Theology and Mission* 36, no. 1 (2009): 32–38.

[20]Westermann, *Genesis 1–11*, 177.

[21]A. G. Hebert, *The Throne of David* (London: Faber and Faber, 1941), chapter 6.

[22]See the essays in Miller, ed., *Perspectives on an Evolving Creation*.

[23]Howard J. Van Till, "Basil, Augustine, and the Doctrine of Creation's Functional Integrity," *Science and Christian Belief* 8, no. 1 (1996): 21–38; George L. Murphy, "Chiasmic Cosmology and Creation's Functional Integrity," *Perspectives on Science and Christian Faith* 53, no. 1 (2001): 7–13.

[24]Athanasius, "On the Incarnation of the Word," in *The Nicene and Post-Nicene Fathers*, 2nd ser., vol. 4 (Grand Rapids, MI: Wm. B. Eerdmans, 1978), 37.

[25]John Polkinghorne, *Science and Providence: God's Interaction with the World* (London: SPCK, 1989), 66–67.

[26]Ninian Smart and Steven Konstantine, *Christian Systematic Theology in a World Context* (Minneapolis, MN: Fortress Press, 1991), 205–206.

[27]G. B. Caird, *The Revelation of St. John the Divine* (New York: Harper & Row, 1966), 168, makes the case for the translation "the lamb slaughtered from the foundation of the world" (cf. KJV and NRSV margin) in Revelation 13:8.

[28]E.g., Richard E. Leakey and Roger Lewin, "Murder in a Zoo," chap. 16 in *Origins Reconsidered: In Search of What Makes Us Human* (New York: Doubleday, 1992), 278–94; Carl Sagan and Ann Druyan, "Gangland" and "Mortifying Reflections," chaps. 14 and 15 in *Shadows of Forgotten Ancestors* (New York: Random House, 1992), 257–92.

[29]Ernst Mayr, *What Evolution Is* (New York: Basic Books, 2001), 259.

[30]Reinhold Niebuhr, *The Nature and Destiny of Man* – Vol. 1, *Human Nature* (New York: Charles Scribner's Sons, 1964), 150.

[31]Ted Peters, *Playing God? Genetic Determinism and Human Freedom* (New York: Routledge, 1997).

[32]Murphy, *Models of Atonement*.

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