Discussed: mind, body, soul, scientific investigation, linguistic resources, philosopher's job, human embryo, Alzheimer's disease, human dignity, Darwin, intelligent design

Nature's God

Nancey Murphy on Religion and Science

By the Editors of the Christian Century

With advanced degrees in theology and the philosophy of science, Nancey Murphy has specialized in the relationship between Christian thought and scientific knowledge. Her book Theology in the Age of Scientific Reasoning *(1990) won the American Academy of Religion award for excellence and a Templeton Prize as an outstanding book in science and theology. Her other books include* Beyond Liberalism and Fundamentalism *(1996) and (with George F. R. Ellis)* On the Moral Nature of the Universe: Theology, Cosmology, and Ethics *(1996). She has coedited several volumes, including* Whatever Happened to the Soul? Scientific and Theological Portraits of Human Nature *(1998). Ordained in the Church of the Brethren, Murphy has taught at Fuller Theological Seminary in Pasadena since 1989. We talked to her about Darwin, suffering, the soul and the origins of the cosmos.*

One common way of thinking about the relation of religion and science is to say that these are two different kinds of investigations that talk about different things: science tells us how the world is, religion tells us why it is that way or what it means. Or: science tells us about God. Does this division make sense?

Separating religion and science into two noninteracting spheres has been a common strategy since the 18th century to avoid conflict between religion and science. While religion (or theology) and science do have different aims and employ different sorts of language, this strategy ultimately fails.

Consider, for example, the issue of human nature. Throughout much of their history Christians have understood humans dualistically as a combination of two parts, body and soul. Developments in the cognitive neurosciences are increasingly making it clear that the brain performs all the functions once attributed to the soul, so the division breaks down. If theologians attempt to maintain the division by saying only things that are immune from scientific investigation (saying, for example, that when we speak of the soul we only mean to emphasize the value or meaning of human life), then theology becomes uninteresting and irrelevant.

James Gustafson has suggested (in *An Examined Faith*) that theologians can 1) ignore scientific accounts of the world; 2) attack them on the basis of a more authoritative theological perspective; 3) interpret them from a theological perspective; or 4) revise their theology in light of scientific

accounts—or some combination thereof. Can you describe your own vocation in view of such options?

Attacking science is entirely inappropriate. However, much of what the general population regards as science is not science itself but scientists' interpretations of science. It is very much the business of theologians to take issue with inappropriate interpretations. An obvious example is the claim that because science does not need to invoke God in its explanations this shows that God does not exist

A more subtle issue is the way science draws upon the limited human linguistic resources of the culture in which it develops. Theologians, because they are aware of a long history of cultural-linguistic developments, are sometimes in a position to point out limitations in scientists' assumptions, limitations due to their limited conceptual resources.

For example, modern physics assumes the self-sufficiency of matter. Christians (and people of other faiths) understand matter to be continuously dependent on the sustaining activity of God. In that perspective, which reflects a different concept of the nature of matter, scientific accounts of what happens are essentially incomplete, though valid within their own context.

Both of the above examples are instances of theological reinterpretation of science. Evolutionary biology per se does not need God, but theologians interpret the evolutionary process as a manifestation of divine creativity. Physicists assume the conservation of matter and energy, but theologians interpret this regularity as a manifestation of God's faithfulness.

Theology does sometimes need to be revised in light of science. For example, cosmology, astronomy, geology and evolutionary biology have together called for rejecting the ancient idea of a Golden Age followed by a historic fall that changed the processes of nature.

The options you offer fail to note that both science and theology intersect with philosophy. Because I am a philosopher myself, most of my work is centered here. In fact, the examination of conceptual resources for understanding human nature or for understanding matter and so on is precisely the philosopher's job. Nearly all of the traditional concerns of philosophy have a bearing on theology and science.

My work has focused on epistemology (how is theological knowledge like or different from scientific knowledge?), philosophy of language (do science and theology use the same kind of language?) and ethics (can science support ethical conclusions apart from a doctrine of God?).

Could you point to any aspect of modern science that has significantly altered your own way of thinking about God, the Christian story or the Christian life?

A current interest of mine is how a physicalist anthropology (that is, a nondualist account of human being) affects one's understanding of spiritual practices. It has been fascinating for me to realize how much our relationship with God is a bodily affair: kneeling before God, for example, or being moved to tears.

I have also been working on the question of how a physicalist anthropology might affect the whole of systematic theology.

As you've pointed out, science has made it extremely hard to posit something like the soul that exists independent of the body, or a mind that exists independent of physical processes in the brain. Some would say the dualistic view was never a biblical view to begin with, though it has long been part of Christian tradition. Do you agree?

I follow New Testament scholar James Dunn in holding that the biblical authors were not interested in cataloguing the metaphysical parts of a human being—body, soul, spirit, mind. Their interest was in relationships. The words that later Christians have translated with Greek philosophical terms and then understood as referring to parts of the self originally were used to designate aspects of human life. For example, *spirit* refers not to an immaterial something but to our capacity to be in relationship with God, to be moved by God's Spirit.

It is widely agreed that the Hebrew Bible presents a holistic account of human nature, somewhat akin to contemporary physicalism. The New Testament authors certainly knew various theories of human nature, including dualism, but it was not their purpose to teach about this issue.

Soul language is often invoked when people contemplate the status of a human embryo or fetus, or speak about someone with Alzheimer's disease. It's a way of saying: there is something here that goes beyond physical reality and deserves respect. Do you think human dignity can be preserved without invoking soul language or something similar?

Much of Christian thinking about the preservation of human life takes a strange detour. We know that Jesus taught us to value all people. His ethic is unusual in the specific focus that he puts on two

groups: our enemies and those we consider to be "least of these" (Matt. 25:46). So regarding the most vulnerable of people, we know as Christians that we need to protect them—and then we invoke the concept of the soul to explain why. But why not just say "because Jesus commands it"?

There may have been a reason in the past to invoke the concept of soul for this purpose. In a culture that was not Christian but did accept dualism, soul language could be used apologetically to argue for protection of the vulnerable. The attempt to use it now for ethical arguments in the public arena simply adds another obstacle, since most secular folk do not believe we have souls (and some don't even know what the word is supposed to mean).

"Because Jesus commands it" is very much an intra-Christian directive, and in that respect it might be said to constitute an obstacle in public argument. In general, do you think Christian ethics should understand itself in a community-oriented way, and not emphasize an "apologetic" dimension in making its claims?

I follow Stanley Hauerwas very closely here: we have to use the language and warrants specific to our own tradition in order to understand our own moral calling. But this does not mean that those outside the Christian tradition cannot understand what we say and see in our ideals a better way of life.

One hundred and fifty years after Darwin, his theory of evolution remains contested in American Christianity and in American public life. How do you assess this fact, and how would you respond to parents or educators who want creationism also taught in their schools?

When I first discovered that there are still Christians who reject evolutionary theory (having grown up in the Catholic school system, I did not encounter this as a child), I thought of it as a harmless expression of ignorance. More recently, though, I've come to see it as tragic. Vast numbers of young people are taught that evolution and Christianity can't both be true. They get a good science education in college, recognize the truth of the evolutionary picture, and then believe that they have to reject their faith.

Another change in perspective for me was to recognize that antievolutionism is not always a product of ignorance, but can be a response to the ways evolutionary theory is taken to sponsor various forms of immorality, social disintegration and so forth. The "immorality" that current antievolutionists have in mind is a rejection of "traditional" family values. I'm not familiar with the arguments, but I believe that they involve claiming that if evolutionary theory is true, then we are nothing but animals.

In addressing parents who want creationism taught in the schools, I would first try to disabuse them of the idea that evolutionary theory is bad science, and then attempt the more subtle task of explaining the differences between a scientific account of origins and a theological account. On this point, the distinction between science and theology we discussed earlier is valid. Science tells us about series of physical events and the laws that explain why one thing happened rather than another. The doctrine of creation explains why the whole process takes place at all. In addition, it tells us what God's purposes are for it and that it is essentially good. The details in the two creation stories are clues about the proper ordering of human life, such as our relation to the other animals.

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The "intelligent design" movement, which points to organisms allegedly so complex they could not have arisen through the process of natural selection, has been part of the recent attack on Darwinism. How do you assess ID? Does it offer a significant critique of evolutionary theory? Does it have any significant theological implications?

The intelligent-design movement has the unfortunate effect of promoting the view that science and Christian teaching are incompatible. I leave it to the scientists to get into the details of why ID fails scientifically. The more significant failure is its misunderstanding of divine action.

Christians have traditionally understood God to act in

at least two ways: by performing special acts (special providence, signs, miracles) and by constantly upholding all natural processes. The ID movement assumes that God works only in the first way. Therefore, to show that God has acted, the ID movement believes one has to identify an event in which no natural process is involved. This is their point in trying to argue that particular events in the evolutionary process cannot be explained scientifically.

The recent criticism of Darwin seems directed at some scientists' inclination to extrapolate from the theory of evolution the conclusion that everything about humans must be shaped by an adaptive, evolutionary logic. Is such a criticism helpful? And is that part of what theology does—critique overblown claims that may emerge from science?

Theologians certainly have a stake in criticizing overblown claims for evolutionary psychology, but so does everyone else. Sophisticated biologists recognize that culture is at least as significant as biology in shaping human behavior. The assumption that biology is the sole factor shaping human life is one instance of reductionism.

I think of the sciences as forming a hierarchy moving from physics at the bottom, through chemistry, biology, psychology, to the social sciences. Each science studies more complex organizations of matter: atoms, molecules, biochemicals, cells, tissues, organisms, societies. One striking assumption of the modem era has been that all causation is bottom-up—that is, the behavior of the (simpler) parts entirely controls the behavior of the whole. This is true in some systems: a clock is designed so that its behavior is strictly governed by the behavior of its parts. But this is not true of most complex systems; in complex systems the whole has reciprocal effects on its parts.

Humans, at the level of whole organisms, are certainly affected by their biological parts, including their inherited DNA, but the whole organism also has effects on the parts (for example, learning something changes neural connections). In addition, the societies that humans live in have effects on individuals and in turn on their biology.

People with theological interests were in the forefront of the critiques of reductionism, but now scientists of all sorts and philosophers are also equally engaged.

Recent studies of the cosmos have led to the notion of an "anthropic principle"—the notion that earth seems to have been fine-tuned to produce human life. Tiny changes in the power of gravity,

say, or in the weight of neutrons would have rendered life impossible. Is all this theologically significant? Does it add anything to the 18th-century "argument from design," according to which, as the existence of a watch points to the existence of a watchmaker, the existence of a carefully designed world points to the existence of a designer God?

The apparent fine-tuning certainly raises the question of design, and it may turn out to be a more appropriate place to look for design than in the functionality of organisms and their parts (as in the design arguments of the 18th and 19th centuries) because it does not rely on finding gaps in the order of natural causes. The verdict is still out on whether it provides any evidence for God.

An alternative explanation is provided by the various "multiverse" hypotheses. In an effort to explain the Big Bang, some cosmologists argue that our universe formed somewhat like a bubble out of a vast universe of similar bubbles. If this is the case, each universe could have different fundamental constants. And in that case, eventually there would be one or more universes with the right numbers for life.

Although I have written about using the fine-tuning argument on behalf of a sort of design argument, I'm actually hoping that there is a multiverse. It seems so much more in keeping with our notions of God's power and creativity to think that he would create all possible universes.

The existence of a multiverse with many universes would seem to raise to a yet higher dimension what we already sense is the lonely place humans have in the cosmos—and the sense that human life is a kind of random occurrence amid God's extravagant creative activity. Do you have that response at all? Does that reality have theological implications for understanding God and God's relation to humans?

There's a different way to look at it. If we find out that it takes an entire multiverse in order to produce intelligent life, then all the more can we say with the psalmist, "What are humans beings that you are mindful of them, mortals that you care for them?" Of course, it is only from scripture that we know about our special place in God's purposes; nature could never reveal this.

What are your goals in teaching people preparing for ministry, who are not going to be professional theologians engaged with science? What do you most want seminarians to know about the relation of religion and science?

Many of my students will be teachers and pastors in conservative Protestant churches, so I think it is important for them to know that they gain nothing and lose much by putting faith and science in opposition. I also want them to appreciate the way scientific knowledge amplifies our understanding of creation, and thereby our wonder and reverence for God.

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This point has to be qualified, of course, by recognizing that the natural world is a source of pain as well as beauty. So reflections on nature must always include the problem of suffering.

After the tsunami last year I read accounts reflecting on the likely responses to the event by adherents of different faiths. I was startled to see that all of the responses were anthropomorphic—that is, they asked, "Why would God do this to us?" None reflected an appreciation of the fact that plain old natural processes were the cause.

A current project for me is the problem of suffering—both animal pain and human suffering at the hands of nature. The issue of cosmological fine-tuning is quite relevant to this problem. The laws of nature had to be almost exactly as they are for us to exist, which means that for us to exist nature also had to have the capacity to inflict damage on our bodies.

I would also like seminarians to recognize the apologetic value of a faith that is well informed. It is common to expect pastors to be sophisticated with respect to literature and the arts. Scientific literacy is equally critical. The ability to provide a theological interpretation of science is as important for pastors as it is for academic theologians.

Are you saying that we couldn't have the physical order we have in this world without also having the level of disorder we have (assuming the tsunami can be properly called "disorder")? Is this another way of saying what the Enlightenment philosophers

once maintained—that we live in "the best of all possible worlds"? Granting that the tsunami was caused by proximate causes, not directly by God, isn't God still somewhere behind the proximate causes?

Yes, geologists can explain why a planet without this recycling of its crust could not support life as we know it. God does not (intentionally) cause tsunamis, but causes there to be a world in which the destruction of life is an unwanted but necessary by-product of the conditions that allow for human life.

One of the problematic scripture texts for many people living in a world of different religions and worldviews is John 14:6, in which Jesus says, "No one comes to the Father except through me." How would you comment on that text? Does it have relevance to your professional work as a theologian who reflects on science?

Most of the scholars I know who work on theology and science are either mainline Protestants or Catholics. I belong to the Church of the Brethren, one of the heirs of the Radical Reformation, which puts primary emphasis on doing God's work in this world.

In a book I wrote with George Ellis, an applied mathematician and Quaker activist (*On the Moral Nature of the Universe*), we began with the evidence for cosmological fine-tuning, and then argued that the best explanation for this fine-tuning is not a bare theism but rather a God understood in terms of the self-sacrifice of Jesus. This concept of God is needed to make sense of the fact that Jesus is "the way, the truth, and the life" in the sense that the salvation of the human race (in this eon) is dependent on taking up his all-inclusive, enemy-loving way of life. Only this response will stop the downward spiral of hatred, violence and oppression.

The emphasis on salvation in this life is not to deny the afterlife, but it should turn our focus away from speculation on who does and does not "make it in" at the end.

Are you suggesting that the natural world in some way reflects, in a demonstrable way, Jesus' self-giving character, which reflects God's self-giving character? Do you mean this in a roughly analogous way? It's hard to know what, say, "enemy loving" looks like in the natural world.

You could never get directly from the natural world to Jesus' ethic, but in light of Jesus we can look at the natural world and see analogies. One analogy is seen in the view—held by most liberal theologians—that God's action does not violate the laws of nature. Actually, because I don't give "laws" the ontological status that many do, I would speak not of violating the laws of nature but of violating the nature of creatures. God creates beings with their own powers and propensities, and does not violate their basic natures in interacting with them, That restraint by God is analogous to Jesus' self-emptying.

Because that is how God relates to creatures, I would not take the story of God causing Balaam's ass to speak (in Numbers 22) to have any historical content. It is a violation of the nature of a donkey to make it speak.

To take another example: Opponents of Christianity sometimes use the violence of predation to argue either that there is no God or else that God has created an unnecessarily cruel world. Science can tell us, though, that predation is necessary in order for us to be here. Then we can join with the 16th-century Anabaptists in seeing the suffering of beasts of burden and animals of prey as a participation in the drama of God's creation and redemption. This was called "the gospel of all creatures."

If you were asked to preach a sermon and you could choose any biblical text, which would it be?

The first thing I would say is, "I don't believe I have a calling to preach, so please ask someone else."

I have in fact hunted for texts that will support a theology-and-science sermon. What I have concluded is that what scripture has to say about the natural world is always said for the purpose of teaching right relations with God and with the community. Nature itself is not of much interest to the biblical writers. So sermons based on such texts may start with some reflections inspired by science, but if they are true to the text they are likely to end up speaking of the worship of God and of justice and of peace with our neighbors. For example, Isaiah writes: "For thus says the Lord, who created the heavens (he is God!), who formed the earth and made it (he established it; he did not create it a chaos, he formed it to be inhabited!): I am the Lord, and there is no other" (45:18). The text offers room to reflect scientifically on God's fashioning (fine tuning) of the universe so that it would be a place to be lived in rather than a formless waste. But the main point, which Isaiah goes on to declare, is this: "There is no other God besides me, a righteous God and savior; there is no one besides me; turn to me and be saved, all the ends of the earth! For I am God, and there is no other."

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