

Physicist and priest, Polkinghorne balances science and faith

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John Polkinghorne, 80, is one of the world's most famous physicists, known in part for his role in explaining the existence of the quark, the smallest known particle. He is the former president of Queens College at Cambridge University in England, a member of the Royal Society, was knighted for his work on England's standards for embryonic stem cell research and for the medical industry's ethical positions, and winner of the Templeton Prize.

When he was in his 40s, he left the world of physics and became a priest in the Church of England. He has written more than 30 books on the relationship between faith and science, and is one of the world's leading voices on that topic.

He will lecture at 2:30 p.m. Sunday at Point Loma Nazarene University on "The Search for Truth in Science and Theology," and will conduct several lectures on the campus through the week on related topics. Ticket information is at pointloma.edu, and at 619-849-2410.

This interview was conducted by Dean Nelson, founder and director of the journalism program at PLNU, and author of the upcoming book "Quantum Leap: How John Polkinghorne Found God in Science and Religion," due out in 2011:

Question: Why do some people think that faith and science are incompatible ---- even hostile to one another?

Answer: I am saddened when I think about the conflict. The two are friends, and not foes. They both are searching for the truth. Some people think science tells all the truth, but they only tell you some of it. Science asks only one question about the world, which is the question of how things come to happen. But it doesn't ask questions of meaning or value or purpose. Science focuses more on impersonal experience, where you can try something over and over, based on experiments . But there is a whole strain of

personal experience where you can never repeat things. Science doesn't tell you everything. Those who think it does take a very diminished and arid view of life.

Q: How can anyone be a person of both faith and science?

A: The basic thing is to keep looking for the truth. None of us has the total truth, and we must keep looking for it and be open to correction in both our religious beliefs and scientific beliefs. That's all we can really do.

Q: It seems that the two extremes oversimplify each other. Richard Dawkins (popular author who advocates for atheism) would say people of faith don't have a brain, and people of faith say science is trying to disprove God. Are they both oversimplifying the issue?

A: Yes, of course. There are fundamentalists at both ends of the spectrum. There are religious fundamentalists who say the Bible has all the answers to even scientific questions. But of course the Bible isn't scientific writing. But scientists like Richard Dawkins are equally fundamentalistic. The irony is that the two extremes are so extreme that they are both implausible. People aren't given the chance to appreciate the insights of science and insights of religion.

Q: Hasn't science disproved a need for God?

A: Stephen Hawking just recently made a claim in his new book that describes what possibly might have happened before the Big Bang. Suppose he's right. It still doesn't answer the question of how things began or why things exist. If his theory is correct, where did that come from? Science will never make God redundant.

Q: But at times there have been explanations about God that science disproved ---- for instance, stories about God's wrath when lightning strikes, or when a plague occurs, that seem silly when lightning rods and rat poison were invented.

A: That's one of the ways science has been helpful to religion. Religious explanations make mistakes, and science helps us see that some things are a natural phenomenon. I think that's helpful to religion. Truth is very beneficial to both sides and helps both see more clearly. It helps and corrects some mistakes. But that doesn't mean all religious belief is a mistake.

Q: Do you, as a scientist, believe in miracles?

A: As a scientist I don't believe in miracles, but as a Christian, I do believe in miracles. I believe in the central Christian miracle, that God raised Jesus from the dead on the third day. The question of miracles is not really a scientific problem as much as a religious or theological problem. Science can tell you that, generally speaking, dead people stay

dead. People of the first century knew that. But God is not condemned to never do anything new or unprecedented. God did something in Christ in a special and unique way, so it is entirely credible that it should be accompanied by unique phenomena, such as the resurrection. The problem of miracles is the problem of divine consistency. God doesn't just do a trick occasionally when he feels like it. God is consistent. The problem is looking at what is the deeper significance the miracles are conveying. In John's Gospel they are called signs, or windows into a deeper reality than the things we see happen every day.

Q: Why did you change careers from science to seminary?

A: I had two reasons. I had a reason for leaving physics. It was not because I was disillusioned. I still think it's a very important subject. I just felt that I had done my bit for it. You do your best work in that field when you're young, and I felt that I had done what I could. The pull was that the worshipping life was very central to me, and I was interested in how the priesthood would allow me to administer the word and sacrament to others. I wanted to devote myself to something that I thought was of utmost importance and significance.

Q: Why should people of faith not be afraid of science?

A: Because people of faith worship the God of truth, and they should welcome truth from whatever source it comes. Not all truth comes from science, but some of it does. It grieves me when I see Christian people turning their backs on science in a willful sort of way, not taking seriously the insights it has to offer. All truth interacts with each other, and all truth is helpful.

Q: Conversely, why should people of science not be afraid of faith?

A: Some people in science are afraid of faith, but they have the wrong picture of what faith is. They think faith is a matter of shutting your eyes and gritting your teeth, believing impossible things, submitting to some unquestionable authority, where an infallible book or an infallible church tells you that's what you've got to do. They don't want to commit intellectual suicide, and neither do I. I have motivations for my religious beliefs, as I have for my scientific beliefs. It's not a matter of shutting my eyes and signing on the dotted line.

Q: What do you say to people of faith who, despite what science says about how old the Earth is, say, "I don't care what science says ---- I just believe in the Bible?"

A: I would say that I believe in the Bible, too. But what I try to do is try to treat the Bible respectfully and in the right way. The Bible is not a book ---- it's a library, and it has lots of different sorts of writing in it. You have to figure out what you're reading. If you read

poetry and think it's prose, you'll make some very bad mistakes. The poem that says "My love is like a red, red rose," doesn't mean the writer's girlfriend has green leaves and prickles. You know it's poetry and not prose. When I read Genesis 1 and 2, I am not reading a divinely dictated textbook of science, telling me how things happened in the early universe. It's saying something deeper than that. I'm reading a theological piece of writing, where God said "Let there be," and things came to be. The irony is that the people who read the Bible in a sort of crass, literalist way, as if Genesis 1 is describing six hectic days of divine activity, are actually abusing the Bible rather than honoring it. Which is sad, really.

Q: A lot of people in science think the Bible is one big fairy tale. You're a pretty smart guy. Do you believe in fairy tales?

A: (laughs) I certainly don't believe in fairy tales. People who say that about the Bible are making a big mistake. They're not recognizing the genre ---- the kind of writing ---- that makes up the Bible. Of course there are stories in the Bible, but there is also an enormous amount of history in the Bible. The Gospels tell of a very remarkable man and a very remarkable life and an extraordinary death that seems to have ended in some sort of failure and desertion, where Jesus says "My God, my God, why have you forsaken me?" Nevertheless, the story continues. I think something happened to continue that story.

Q: What do you think heaven is?

A: There is no expectation that science can describe anything about a destiny beyond death. Science can tell us only one part of the story, which is how the process of this present world unfolds. We all know we're going to die, and we also know, if we've studied science, that the universe itself is going to die eventually. But the story of science is not the only story to tell. There's another story. And that's the story of God's faithfulness. That's the story that gives us the ground to believing in a destiny beyond death. Jesus had an argument with the Sadducees about whether there was such a destiny. He said that God is the God of Abraham, Isaac and Jacob, and that he is the God not of the dead, but of the living. That world will be different from this world. It will be the transformation of this world, the redemption of this world, where there will not be any pain or suffering. That's so different from our world, and we have to think about that in stories and pictures. We're not given a prospectus on heaven describing whether it's going to be worthwhile or not. But we are given the hope of heaven, of eternal life, of the eternal faithfulness of God.

Q: A lot of people say they can't have a faith because of all the damage done throughout history in the name of God and the church. The crusades, burning of alleged witches, the Inquisition, for instance. How do you respond to those charges?

A: The first thing to do is acknowledge that those things are part of the story ---- a very sad part of the story. One has to be truthful and recognize that those things happened. There is a saying that says, "The corruption of the best is the worst. When religion goes wrong it can go very wrong indeed." But to see religion as unique as the source of oppression and suffering is dishonest and historically inaccurate. In his book "The God Delusion," Richard Dawkins tells of the terrible things done in the name of religion, and that is certainly part of our story. But he also mentions Hitler and Pol Pot and Stalin and other atheists. The basic source of human wickedness is that something has gone wrong with human nature. And what is wrong with human nature is that we have become isolated from the God who is the only ground of the grace of a fully satisfying and satisfactory life. The idea that the best way to do things is to do it our way on our own is a very unfortunate and bad mistake.

Q: Some people say that scientific discovery contradicts what their pastors or parents or schools are telling them. What do you say to them?

A: It depends on where their contradictions lie. If their pastors tell them that the Earth is 6,000 years old, for instance, then the pastor is telling them something that I don't think is true, and you have to come to terms with that. One of the dangers of extremely fundamentalist belief is that it's very brittle. There is a terrible temptation when people are brought up in that kind of thinking, and they find out that the Earth isn't 6,000 years old, and the whole thing shatters. They feel that they not only have to correct that misbelief, but also discard everything else, and I think that's a very sad mistake. We have to encourage people to keep searching for truth, but not to do that by cutting down the complexity of things. Some people seem to want a world view that provides understanding and explains everything. Some people do that by throwing out half the experience.

Q: Do you ever see the reverse happen, where someone who is committed to science and scientific discovery has some sort of religious experience that he cannot explain?

A: Sometimes it happens in quite dramatic ways, maybe through religious witness, or reading the Bible, or unique situation where they know that all will be well in the end. I think you have to take these experiences seriously. I'm a fairly humdrum Christian believer and haven't had any major dramatic experiences.

Q: But if a scientist has some unexplainable experience, couldn't that upset him or her?

A: I'm sure it could. If you work in fundamental physics, as I have, you're struck by the wonderful order of the world. You're struck by a very deep and underlying sense of wonder. It makes people who work in fundamental physics ask if there is some sort of mind behind this. Physicists use language that includes "Mind of God" when they write

for the general public about science. There is also an intuition that the world is wonderfully ordered in a way that doesn't look like a happy accident.

Q: What's the most important thing that science has taught you about God?

A: Interestingly enough, it's that we live in a world that is an evolving world. From a theological point of view I see it as a continuing creation, not a creation ready made, but which is still developing and bringing to birth a fruitfulness, endowed with potentiality, that creatures can make themselves. It's a very wonderful world. But it has an inescapable shadow side to it. Mutations help develop new forms of life, but they also develop diseases. That shows me that the anguishing fact of cancer is at least not gratuitous. These things are entangled with one another and we can't pull them apart. That's helpful to me as I wrestle with the question of suffering.

Q: Suffering is one of the big burdens when people consider whether they want to have a faith.

A: I don't wish to diminish the problem. It's a perplexing problem. The Christian aspect to that, which to me is very helpful, is that God came to human life in Jesus Christ, and when Christ suffers on the cross, in the darkness of Calvary, we see God not as a spectator of the suffering in creation, but as a fellow sufferer, a participant in the suffering of creation. I find that helpful in how God relates to us.

Q: Steven Weinberg, a physicist you know, said one time that scientists don't believe in quarks because anyone has seen one ---- they believe in quarks because the theories that include quarks seem to work. Physicists are therefore comfortable with unseen realities. So is it easier for a physicist to believe in God?

A: Certainly, physicists believe in unseen realities without even thinking about it. I believe that the wider and deeper personal experience suggests the existence of God, that there is a will and purpose and mind behind it all.

Q: Science seems to explain some things, but sometimes it explains contradictory things, such as when light was discovered to be both a wave and a particle. So can scientific thinking actually help one's religious thinking?

A: It helps in this sense ---- that scientific thinking makes it clear that the world is stranger than we thought, and even stranger than we could have thought. No one could suppose way back then that light could behave both as a wave and a particle. Those two things are chalk and cheese. But now we understand it. That means if a scientist is considering a deep question, whether inside science or outside of science, instead of asking "Is this reasonable," as if you knew beforehand what path the rationality would have to take, they ask a different question that is more open and more demanding. It is

"What makes you think this is the case?" You have to produce motivating evidence for it. In science it can be experiments that you can repeat. But in personal beliefs we don't have that power of repetition and testing. Those are attained more through trusting than testing. As in my scientific beliefs, my Christian beliefs can be defended when I answer the question, "What makes you think this is the case?"