



## Genes, Genesis and God

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Templeton prize-winner **Holmes Rolston III** won over a million dollars US for his achievements in the fields of theology and science but gave it all to his university to establish a chair in Religion and Science. He speaks with Rachael Kohn about the religious and scientific values that have made his work, such as *Genes, Genesis and God*, and *Environmental Ethics*, among the most respected and quoted throughout the world.



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### Transcript

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**Rachael Kohn:** Hello, and welcome to The Spirit of Things. I'm Rachael Kohn?

Every year the Templeton Prize, worth more than \$US1-million is awarded to someone who's contributed to the progress of religion. This year it went to Holmes Rolston III for his work on science and religion. He's my guest on today's program.

You'll also hear from a much younger scholar, Nina Azari, who I reckon is a perfect candidate for the Templeton Prize in the future. She's got two PhDs, one as a neuroscientist and one as a theologian. She takes up the subject of the biological basis of religious experience where we left it last week, and is both prudent and revealing about what neuroscience can tell us about faith.

**Rachael Kohn:** Holmes Rolston III is Distinguished Professor Philosophy at Colorado State University. He's held posts from Helsinki to Japan and has been invited to lecture in 11 Australian universities, which is most of them.

In his book, *Genes, Genesis and God*, Holmes Rolston has taken issue with Richard Dawkins' notion of the selfish gene. He's also an eminent spokesman for environmental ethics. He describes himself as a man of strong Christian faith, and I was fortunate to meet with this most recent recipient of the Templeton Prize in Atlanta, Georgia at the American Academy of Religion Conference.

**Rachael Kohn:** Holmes Rolston, you've been awarded the Templeton Prize for Progress in Religion, but it seems you're more a scientist and philosopher than you are a theologian. Have you always had an interest in bringing religion and science closer together?

**Holmes Rolston:** I have always had an interest in bringing them closer together. I did study theology, I have a PhD in reform theology, so I wouldn't want to say I was never a theologian, but you're right, I've spent most of my life mixing science and philosophy. I now teach in a Department of Philosophy at Colorado State University, and one of the things I'm supposed to be good at is sort of thinking philosophically about the implications of science.

**Rachael Kohn:** I guess you don't buy the view that science and religion are two separate spheres of knowledge? The late Stephen Jay Gould in his small book *Rocks of Ages* called them 'two distinct magisteria'. Why shouldn't science and religion be kept far apart?

**Holmes Rolston:** Stephen Gould's book does separate them widely. Religion turns out for him to be more of a sort of art form than anything that has a serious content to it. Now I think religion does have serious content, and I think science has serious content. In a rough way you could sort of say that science gets at the causes in things.

Religion gets at the meaning or the significance of things, and it's a way in which those are different levels of activity like, say, law and poetry are different kinds of activities and you might say they don't meet. On the other hand since they do both deal with, say the natural world or with the character of human and life, they do overlap and in that sense they do need to be in dialogue and in conversation with each other, though each discipline does have its separate integrity.

**Rachael Kohn:** And so do you keep them sort of apart and in a dialogue, rather than developing a new kind of form of religion?

**Holmes Rolston:** I think dialogue is the right word. I would keep them in conversation. But when they are in conversation I think each influences the other. Now you can do science without studying theology, and you can study theology without knowing all that much science. On the other hand, we have discovered for example, in biology that there is an immense rich biodiversity generated in evolutionary history and I think that raises questions about the meaning and significance of this.

So in that sense the biologist can be open to deeper kinds of questions about the meaning and significance of the life they study. Likewise the theologians once said of sort of classically a doctrine of God as Creator who designed or crafted the creatures, now I think in the days since Darwin we've had to have a different account of what creative activity is. It has to do with an evolutionary genesis over periods of time, and in that sense the science I think changes the forms and concepts of creation and theological thinking, so they influence each other.



**Sunday 6pm**  
repeated Tuesday  
1pm and Wednesday  
2am

Presented by

**Rachael Kohn**

**Rachael Kohn:** Are you a fan at all of reinterpreting the Bible in more scientific terms so that the Bible becomes perhaps a metaphor or a story that points to a scientific reality underneath it or behind creation?

**Holmes Rolston:** Bible writers were not scientists. They did know the landscape on which they lived and they could celebrate its richness, its beauty, its biodiversity. I think we know much more about the richness. We know we live on a planet with millions of years of evolutionary history. They didn't know that. On the other hand, the sciences, we've had 400 years of modern science now.

They've left the value questions as sharp and painful as they've ever been. And science on the whole realises it's not all that competent to make value judgements, and so if we're worrying about, say, the widening gap between the rich and the poor in today's world, or if we're worrying about why in hell we ought to care for the goodness of creation, then the scientists leave a space in which I think religious reflection and Biblical reflection is still prominent. The prophets in the Hebrew Scriptures said that land would flow with milk and honey, yes, but only if there was righteousness and love, and in that sense, that kind of belief that the earth can fulfil its promise only if used with justice and love, that's still a very important Biblical truth I think, we can use today.

**Rachael Kohn:** Well speaking of values, I think the battle lines were drawn by scientists like Richard Dawkins whose argument for the selfish gene reduced human behaviour to necessity, almost ruling out notions of pure altruism or other values that compel people to behave in a way that we would call moral. How does your notion of genetic values, which you've written about, differ from Dawkins' view?

**Holmes Rolston:** Richard Dawkins is a prominent, controversial biologist. I think he thinks of himself now more as an interpreter of science than as an actual practising scientist. He does have a prominent book called *The Selfish Gene*, and I have quarrelled with him; my Gifford Lectures, *Genes, Genesis and God*, contain a number of places where I think his views are mistaken. He sees things in terms of selfishness. It seems to me there he's borrowing a moral concept from the realm of human affairs. He's applying it to genes.

Genes can't think, or genes can't be sad or glad or laugh or whatever. So he's taken the kind of attribute that we do know in the moral life, applied it to genes, and I think often inappropriately. I say that the better kind of language, if you like, is to think of genes as being self-actualising, of them to think of genes as doing what is proper or appropriate for genes to do, which is to defend the good of the kind that is embodied in genes. I speak of that as defending an intrinsic value, so instead of his kind of morally pejorative language is about selfishness, I prefer the language of value which is actualised and defended by organisms, and it seems to me to be a perfectly appropriate thing for an organism to do, to defend the good of its kind.

**Rachael Kohn:** Is that in any way similar to or does it have parallels to another Templeton Prize winner, Charles Birch's notion of all life being in a constant state of striving for relation, that's somehow also connected to survival, although sometimes it doesn't lead to survival.

**Holmes Rolston:** Yes, Charles Birch is a prominent ecologist, he's also been outspoken in religion and science circles. He's a friend of mine, we are acquainted, he's a previous Templeton Prize winner. Birch, with John Cobb, has a book on the celebration of life on respect for life, and in that sense his thinking and my thinking are parallel. Birch is an ecologist so one of the things he knows is that organisms don't simply exist on their own and by themselves in isolation, but they exist as adapted fits in the ecosystems, and I like to replace the language of survival of the fittest, which Richard Dawkins has his selfish genes and survival of the fittest, I'd like to say it's more a question of organisms having a good adapted fit, and I think Charles Birch would think along those lines equally.

**Rachael Kohn:** Is morality then or moral values, part of that desire to adapt and to fit, I wonder whether you think that moral values or moral tendencies that we exhibit are in any way wired into us?

**Holmes Rolston:** I think that humans are the only self-conscious moral agents. So I don't think that kangaroos or the wallabies are moral agents. Each kind defends its own form of life, and that's a good thing. But they're not self-reflective about this, they're not conscience agents. Humans are, they do become conscious agents, and now I think their capacity to do that is important in our flourishing and in our wellbeing. So the kangaroos and wallabies don't have to adapt to a moral life to be goods of their kind. Human beings however, do have the capacity to choose alternatives, to think about good and evil, that's why we are religious and they are not, we are ethical and wild animals are not. Now I think it's important for human flourishing to be religious, to be ethical, to know how to live in community together. As I said a moment ago, the Hebrew Prophet said that we don't use earth rightly unless we use it in justice and in love.

**Rachael Kohn:** So you don't think that the work that people like Frans de Waal have done showing that chimpanzees and possibly other groups of primates or animals exhibit moral tendencies?

**Holmes Rolston:** I think the human moral life evolved, once upon a time there came to be moral agents when there were not previously moral agents. Now we have quite a number of people, and you mentioned Frans de Waal, who's prominent in this thinking that there are precursors of morality in animal behaviour. I'll welcome those if I find them, I'm less impressed with the strength of those than some are. I think even if you look at Frans de Waal's work, he will say, I quote a passage or two from him in my book on *Genes, Genesis and God*, where he concedes that only human beings are highly self-consciously critically reflective.



We have to think about whether abortion is moral, we have to think about capital punishment, we have to think about the gap between the rich and the poor. Frans de Waal knows that no animals do this kind of thing. He simply means that animals live in societies, they have dominant hierarchies, they know their place in these communities. It's probably true for example, that there is a dominant in a tribe, and that others will sort of gang up on him if he gets to be too dominant. It's probably true that they don't like to fight too much and so they may let the dominant break up fights among them. So there's some things there where you might find what I would simply call precursors of morality in animal life. But nothing approaching the sophistication of moral life. I think Jane Goodall says the same thing about the chimpanzees with whom she had worked.

**Rachael Kohn:** It seems to me religious traditions are eternal, because they have always taught that despite aeons of history, human behaviour remains depraved. I mean there's no other word about it, and that is exactly why we need religion. Do you believe we are nonetheless on an upward evolutionary path?

**Holmes Rolston:** We have many millennia of natural selection behind us, and I think that over the years of natural selection both diversity increased and complexity increased. There came a time in natural selection though when humans became cultural animals, and when they pass into culture with moral life, with the capacity to understand. a theory of mine, with the capacity to understand what's going on in other minds, with language, I think we escape from natural selection to a considerable way, and so we pass over to what I call a realm of culture, and there I think there is development.

It might not, you have to be a little careful to say it's evolutionary development, it's evolutionary in the sense it's historical and developing. Now I think that in human cultural life, the answer to your question is both yes and no. In some ways we do make progress, we have for example, in my lifetime, altered our views of the role of women in society, we have my grandfathers at least one side, great-grandfathers, were slave owners, we don't do that any more.

We have concepts of human rights that are richer than they were before. I think there are ways in which we do make progress. On the other hand, the Bible, where once again we get back to traditional classical religious wisdom, the Bible has the Seven Deadly Sins, greed and lust and sloth, and these kinds of things. The Seven Deadly Sins are very much with us, and they're likely to be with us 500 years from now, 1,000 years from now, even with all our prospects for genetic engineering, these kind of human frailties are perennial. And also on the other side the human virtues, love and charity and forgiveness and caring, concern, you could do that, in Jesus' time, you could do that in the Middle Ages, you could do that in modern times.

**Rachael Kohn:** That gentle Southern drawl belongs to Holmes Rolston III, winner of the 2003 Templeton Prize for Progress in Religion.

Later we'll hear from another scholar whose twin expertise in neuroscience and theology may make her a candidate for the Templeton Prize in the future.

**Rachael Kohn:** My guest today is Holmes Rolston III who's convinced the Seven Deadly Sins are with us forever, even if society progresses.

It seems to me it's much easier to point to the ways scientific knowledge has evolved, but often harder to point to the ways in which we have evolved morally, although as you pointed out, society can certainly reflect changes of values. But as human beings we still have to contain those baser motives.

**Holmes Rolston:** We do. There are certain sorts of things that you can inherit from your fathers, and mothers, but I was thinking scientifically, where the inventions, Thomas Edison invented the light bulb, and we can see what it did, and we don't have to invent the light bulb again. But if you have a child and the child needs to learn how to be let's say courageous, the child can't just sort of read a book on what it's like to be courageous, like the child can read a book on what you do to make a light bulb. Certain things do have to be reinvented, re-learned, and I think love and forgiveness and justice and charity, there's a way in which these have to be rediscovered in each generation, and a way in which the scientific truths do not.

**Rachael Kohn:** Increasing the Templeton Prize winners are really talking about a God that is more creator of the earth and its inhabitants than a God who is speaking words of consolation to the faithful. Does that reflect the scientists' interests in the material world?

**Holmes Rolston:** Well material world, the natural world I would prefer to put it. Scientists do study nature, they study astronomical nature, they study sub-atomic nature and physics, they study molecular nature, molecular biology, they study evolutionary biology and in that sense science has given us an account of nature and we are struggling for the meaning and significance of that kind of account. That's been big on the agenda with the discovery of the size of the universe, its age and extent, these are all things that have come in the last couple of hundred years, and so science teaches us to deal with that.

Now you might say, Well these aren't the kinds of things that ordinary people need to know if they're wondering whether to divorce a wife, or to forgive someone who has told them a lie or something of that sort, it's true that science doesn't say a lot about these kind of things, but science doesn't have much competence in those areas, so if you're wondering whether to keep your promises or tell the truth or commit adultery, scientists don't do that. Now notice though the Templeton Prizes have gone to people like Mother Teresa for her work in India, or Billy Graham, so the Templeton Prize in the past has gone to non-scientists who blazed new seminal paths in religious thinking.

**Rachael Kohn:** Why is it important for you and perhaps for society as a whole, the world as a whole, to see God in nature?

**Holmes Rolston:** Well we live in a time of environmental crisis. For the first time in the history of earth humans, one species among millions on earth, jeopardises a good deal of the richness and beauty on earth. We may be, we are causing radical extensions, we may be altering the climate, we are putting increasingly heavy demands on the planet, the resources of the planet which may not be sustainable, so the agenda for the next century, the agenda for the next millennium I think is humans caring for creation, caring for the planet.

We previously needed to know how to get along with each other, that's still important; we previously fought wars and needed to know how to make peace among the wars, that's still important. But this is the first time in the history of earth that sort of fundamental natural givens, air, soil, water, oceans, the wild life, the cycling of the seasons, all that, these things were thought to be ordained of God forever, by our ancestors, but we now put them in jeopardy, and that's why I think humans' thinking about caring for nature is so important, and I guess some Templeton judges, at least thought so too, because I got this prize for that.

**Rachael Kohn:** It's really interesting that although our tradition, the Biblical tradition, has many, many passages, and indeed opens with God's creation, that somehow religion has lagged behind developing an ecological consciousness.

**Holmes Rolston:** Religion has lagged behind, and I sometimes say that I've had a lover's quarrel with both the disciplines I love, science, thinking often nature was value free, but religion, often thinking that nature was fallen or that we needed to attend to humans and their salvation and pay attention to the natural world, and in that sense I hope we've been waking up about humans caring for creation. The church did have a program, Justice, Peace and Integrity of Creation, there's that. There's practically Protestant denomination in the United States has a Study Commission of some sort about caring for creation, so it's not that nothing has been done, but the church needs to move more rapidly than it has.

**Rachael Kohn:** Indeed the Pope has also called for an ecological conversion of the church, which brings me to Africa, where of course the Catholic church is both very strong and also very conservative. When I read about the rapid decrease of the great animals in Africa, I feel utter despair, and yet I often hear, when I mention it to people that really I should be worrying about the starving inhabitants, the human inhabitants of Africa, and it makes me wonder whether the ecological values that you have been writing about and speaking about, will always falter when compared to human wellbeing, or the wellbeing of humans.

**Holmes Rolston:** Well I have an article that's sort of notorious I suppose in which I argue that it can be more important to save the tigers than to feed the hungry and the poor. Now I have to say that carefully and I do repeatedly say we should make every effort to feed the hungry and save the tigers, when I defend shooting poachers of elephants and those kinds of things. My essential argument is that problems need to be solved in the right place, and the people are hungry in India, people are hungry in Nepal, they're hungry in Africa, and you could say if you like, Well if they shoot the elephants they can grow some crops, or if they shoot the tigers, that are in these tiger sanctuaries, they'd like to get rid of the tigers and take cattle in to graze in those lands.

What I say is, that solves the problem for five years, it solves the problem for ten years and then the problem is right back at you. The deeper problem is escalating populations, the deeper problem is widening gap between rich and poor; one of the wealthiest persons in Africa is in Kenya for example. So it's usually the deepest solution to these problems is going to be in a more equitable distribution of wealth on the lands that are now occupied, and usually the social problems get cast off and they say, Well shoot the elephants or shoot the tigers.

I don't have to talk about Africa, or Nepal, I can talk about my own nation, America. In the Pacific north-west you'd say, Well can a spotted owl be more important than jobs for loggers? And bumper stickers up there say Hungry Loggers eat Spotted Owls. That's misdirected. What's happening is that we've been mining timber that grows in hundreds of years cycle rapidly. Those loggers could mine 90% of it's gone, those loggers could mine timber another ten years and then they're going to be hungry and have no spotted owls. You need to fix the problem in the right place, and when the wildlife is in jeopardy it's often like a miner's canary, it's just waking us up to deeper problems. Fix the problems in the right place.

**Rachael Kohn:** Speaking of wealth, the Templeton Prize is certainly one of the most generous prizes in the world, and you were awarded it in Buckingham Palace; can you tell us about that event, what happened? I think it was Prince Philip who gave you the prize?

**Holmes Rolston:** Yes, Prince Philip delivered the cheque, but of course the funds are provided by Sir John and the Templeton Foundation. Well they took us, my wife and myself, a couple of family members, off to London and put us up in the fanciest hotel I ever stayed in, and we got into a cavalcade of five of the fanciest cars I ever rode in. My wife and I were in the lead car, we drove up to Buckingham Palace, were halted at the gates by guards, and we were escorted inside, met by the Prince's Equerry, I even had to look that word up in the dictionary to see what that is (!) It goes back to the idea when the Prince had someone in charge of his horses. We were told how to behave, we were ushered into the gorgeous Chinese Room, and the Prince appeared, and he was cordial and I received the prize. It's about \$US1.1, and it is indeed -

**Rachael Kohn:** \$1.1-million.



**Holmes Rolston:** Yes, US Dollars, 750,000 pounds, something like that, larger than a Nobel Prize, they brag about, emphasising the importance of religion. So it was a nice ceremony in the Palace. And later in the day, that afternoon actually, towards evening, there was a more public reception and there was present a young woman, Vice President of Davidson College, and I gave the money to Davidson College which is my alma mater, it's a school in North Carolina in the United States, a good liberal arts school, to endow a chair in science and religion. So I say that I was a millionaire for six hours.

**Rachael Kohn:** You mean you didn't even buy one of those expensive electric cars?

**Holmes Rolston:** Well my wife said I should have taken out at least enough to buy her one of those Continentals that Sir John himself likes to ride around in, but no, I didn't do that, so I actually delivered the whole cheque to Davidson College. Why did I do that? That's where I got my start, thinking about science and religion. I'm an old man, got some grey hair and I won't be around forever, but I think that money will still be at work helping young minds to start thinking about science and religion for the next 50 years, 100 years, hundreds of years.

**Rachael Kohn:** Have you got anything new that you're working on? A new frontier you're breaking through, even at this age?

**Holmes Rolston:** Well I'm wondering whether there's a new frontier to break through or not. I had a good summer, I went to Africa and tracked gorillas. I wanted, you know we talked about Franz Duval and human origins. I wanted to see chimps and gorillas, I'd been to Africa a number of times, but I never saw either chimps or gorillas, and so I spent some time tracking them, and found them both and tried to figure out and think about the three most advanced primates, humans, gorillas, chimps, that gave me some interesting thoughts this summer. I rode horseback in Montana, I can enjoy my own Rocky Mountain wilderness this summer, so I'm still active. I'm teaching this Fall. I might one day write a book on nature and human nature.

**Rachael Kohn:** Holmes Rolston III we are looking forward to it. Thank you so much for being on The Spirit of Things.

**Holmes Rolston:** Thanks, and take care of Australia, it's a great country.

**Rachael Kohn:** Holmes Rolston III, millionaire for a day, winner of the Templeton Prize for Progress in Religion.