Engaging Robert J. Russell's Alpha and Omega

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GAPS IN THE ARGUMENT: A DISCUSSION OF CERTAIN ASPECTS OF COSMOLOGY

by Michael Ruse

Abstract. In this discussion review of Robert John Russell's collection of essays I agree with him about the necessity of human existence given the claims of Christian theology. I look in detail at his suggestions for speaking to this issue, especially his thesis of NIODA—noninterventionist objective divine action. I end up disagreeing with the suggestion and argue that in respects Russell is tackling the science-religion relationship in the wrong way.

Keywords: Simon Conway Morris; Richard Dawkins; Stephen Jay Gould; human nature; NIODA (noninterventionist objective divine action); Robert John Russell

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Robert John Russell's *Cosmology: From Alpha to Omega, The Creative Mutual Interaction of Theology and Science* (2008) is a very important book. I could wish it were a unified monograph rather than a series of essays, but overall there is coherence and direction. I have long been critical of work being produced in the science-and-religion field, thinking it flabby at best, but Russell treats science seriously and knowledgeably, and, more important, he knows his Christian theology and is not ashamed to delve into it. There is much work to be done, as Russell himself stresses again and again, but we are on the road now.

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I say this despite the many differences between Russell and myself. Obviously, he comes from physics and theology, whereas I come from biology and philosophy. I look upon this difference as important but perhaps not that deep. He is a believing and practicing Christian, whereas I am an ex-Quaker who probably has as little religious belief as Richard Dawkins. I consider this difference to be important and deep. Yet we come together convinced that science and religion can be friends, in mutual interaction adding to the understanding of both. That Russell would feel this way needs no explanation. That I feel this way needs explanation. First, I think that in America, unless people of science are prepared to reach out to people of religion, we are all going to suffer. Religion will end up being taught in science classes—and not the best religion, either. This reason is important but not deep. Another reason is that to the end of my life I will be grateful to my parents and their fellow members of the Religious Society of Friends for my childhood and their love and care—love and care that came from their religious convictions. This reason is important and deep.

I dwell on these matters, talking about myself in what is supposed to be a discussion of another, because I want the reader to understand that if I have questions to ask, I ask them in a spirit of inquiry and concern, wanting answers, rather than intending refutation of Russell in particular and religion in general. This is too good a book to give it an easy pass. Tough-minded thinking deserves tough-minded response.

Because I am one of several commenting on the book, I make no apologies for being selective and focusing on issues on which I myself have written—especially in my *Can a Darwinian Be a Christian?* (Ruse 2001) —and which Russell cites and discusses in his pages. Our mutual friends know that Russell and I have clashed in discussion on these matters more than once.

Let us begin with two things that are absolutely central to Christian thinking. The first is that humans are not contingent. Of course, we did not have to exist, but because God decided to create us, we do exist, and moreover—in the Judeo-Christian tradition—our nature is something special. We humans are made in God's image. This of course needs unpacking, but essentially all are agreed that at a minimum it means that we are intelligent and that we are moral beings. In the Christian scheme of things, we had to exist and have the nature that we have. We might instead have had green skin and six fingers, but we had to exist and be bright and morally sensitive. The second is that in some fundamental way God cannot be responsible for evil. God is all loving and also all powerful, and so evil cannot be laid at God's feet. You have to find some way to explain evil, both the moral form (Auschwitz) and the natural form (Lisbon earthquake).

Now, as Russell well knows, these two claims open up major pitfalls for the believer, especially the believer who is trying to take modern science seriously. Scientist after scientist today stresses the complete contingency

of human existence. The late Stephen Jay Gould was a paradigm. Referring to the asteroid that hit Earth about 65 million years ago, killing the dinosaurs and making possible the rise of the mammals, he wrote:

> Since dinosaurs were not moving toward markedly larger brains, and since such a prospect may lie outside the capabilities of reptilian design . . . , we must assume that consciousness would not have evolved on our planet if a cosmic catastrophe had not claimed the dinosaurs as victims. In an entirely literal sense, we owe our existence, as large and reasoning mammals, to our lucky stars. (Gould 1989, 318)

If this is all there is to be said on the matter, Christianity is in deep trouble. Humans do not have the necessity of existence that the Christian story demands. There are ways in which one can try to get around the problem. Gould was always contemptuous of claims about the necessary progressive nature of the evolutionary process—monad to man, and that sort of thing—but many good evolutionists argue to this day that the process really does show direction and the endpoint is something like *Homo sapiens*. Edward O. Wilson is one:

> . . . the overall average across the history of life has moved from the simple and few to the more complex and numerous. During the past billion years, animals as a whole evolved upward in body size, feeding and defensive techniques, brain and behavioral complexity, social organization, and precision of environmental control—in each case farther from the nonliving state than their simpler antecedents did. (Wilson 1992, 187)

He adds: "Progress, then, is a property of the evolution of life as a whole by almost any conceivable intuitive standard, including the acquisition of goals and intentions in the behavior of animals" (p. 187).

Part of the problem has to do with the motive force behind this evolution, especially since natural selection seems not obviously progressive—success in the struggle for existence is relative, and what succeeds on one occasion may not be what succeeds on another—and mutations, the building blocks of evolution, are random in the sense of not appearing as a function of organisms' needs (Ruse 1996). Dawkins believes in progress because he believes that organisms get caught up in "arms races"—competing evolving lines with ever-improved adaptations, such as the prey gets faster and so the predator gets faster—and that, as in military arms races, better and better computers are the secret to success. Dawkins refers to the notion of an animal's EQ, "encephalization quotient." This is a kind of cross-species measure of IQ that factors out the amount of brain power needed simply to get an organism to function (whales require much bigger brains than shrews because they need more computing power to get their bigger bodies to function), and that then scales according to the surplus left over. "The fact that humans have an EQ of 7 and hippos an EQ of 0.3 may not literally mean that humans are 23 times as clever as hippos! But the EQ as measured is probably telling us *something* about how much 'computing power' an animal probably has in its head, over and above the irreducible

amount of computing power needed for the routine running of its large or small body" (Dawkins 1986, 189). The implications are obvious.

Paleontologist Simon Conway Morris (2003) tries a different tack, arguing that organisms find ecological niches and that humans have found the intelligence niche. If we had not, the remarkable and repeated instances of convergence in evolving life—saber-toothed tigers that were placental and saber-toothed tigers that were marsupial being a great example—suggests that some other organism would have.

If brains can get big independently and provide a neural machine capable of handling a highly complex environment, perhaps there are other parallels, other convergences that drive some groups toward complexity. Could the story of sensory perception be one clue that, given time, evolution inevitably will lead not only to the emergence of such properties as intelligence but also to other complexities, such as, say, agriculture and culture, that we tend to regard as the prerogative of the human? We may be unique, but paradoxically those properties that define our uniqueness can still be inherent in the evolutionary process. In other words, if humans had not evolved, something more or less identical would have emerged sooner or later (Conway Morris 2003, 196).

I do not find either of these suggestions overpoweringly compelling. The importance and power of arms races has been challenged. For instance, the fossil record does not show that prey-predator interactions always lead to greater speed (Bakker 1983). And it is not obvious that intelligence must emerge. Big brains are very expensive; they need lots of protein, which, in the days before health food stores, meant lots of meat. This is not always easy to get, and sometimes one is better off (as, say, ungulates) eating and digesting large quantities of low-grade food. A major problem with Conway Morris's thinking is that it is not simply or always the case that niches sit around waiting to be occupied (Ruse 2007). Organisms make the niches. Think of the niches provided for insects by the trees of the Brazilian rain forests. If there were no trees, there would have been no niches. Likewise, can we really say that intelligence was waiting there to be occupied? It is true that humans have made such a niche, but did it exist independently of us? If not, why should it ever have been created by others?

Although Russell does not explore these matters in detail, I think he shares my worries at this point. This is where his own innovative solution, what he calls NIODA—noninterventionist objective divine action—kicks in. He thinks that God works in the creation, really (objectively), on an ongoing basis. For this reason he is prepared to think of himself as a theistic evolutionist. The problem, as Russell knows full well, is that most people think that theistic evolution is a nonstarter. When Charles Darwin's American Christian friend Asa Gray suggested that the mutations on which selection works must be directed in some way, Darwin responded savagely

that this took the whole discussion out of the range of science (Ruse 1979). That is also the problem with so-called intelligent-design (ID) theory. Its supporters want to bring God into the scientific process, and that is interventionism—which is a no-no.

Russell's clever maneuver is to fly beneath the radar, as it were. He argues that God could be working at the subknowable level. Thanks to quantum mechanics, we know that the best that we can hope for in understanding such things as radioactive decay is a statistical result. In time *t*, *x*% will go one way and *y*% will go another way. We cannot say for sure which exact time brackets (slices of *t*, as it were) will get the *x*-leaning effects and which the *y*-leaning effects. So God could get involved here—not intervening in the sense of breaking or altering the laws as we can know or measure them but at work nevertheless. And if, say, an *x* effect is needed in one time-slice to set off a mutation that will help (lead to the progress of evolution ending in humans), God can and does do this. That is the sense of noninterventionist. It is not nonactionist; God is very active. It is just that God is not breaking the laws of nature as best we know or could know them.

Russell has his cake and eats it, too. He has the unbroken laws of nature, and he has a progressive rise in evolution, from blobs to humans. He stresses —and after much argument with him I am now inclined to think he is right—that this is not a traditional God-of-the-gaps argument. He is not with Isaac Newton and Asa Gray and the ID theorists in wanting to bring God into science to mop up the missing moves (a somewhat mixed metaphor, but you know what I mean). This does not mean, however, that Russell is off the hook.

I will say two things. The first is important and deep but perhaps best left for a full discussion elsewhere. The second is important, if not so deep, but can be treated here.

The first is that I do not like bringing in God in this way. Without wanting to get caught up in what Russell rather cutely calls statistical deism, I don't like God's having to keep working at special points to keep creation going. I am happy for God to be doing it all of the time. In fact, I think a Christian has to believe this. If God lost attention for a moment, or had a heart attack, the world would collapse at once into nonbeing. I do not like God interfering in the creation. In general, I agree with Augustine that God is outside time and, hence, for God, the thought of creation, the act of creation, and the product of creation are as one. God doesn't need to keep at it in a special way for some events and not others. This is quite apart from my general discomfort about tying a solution to a theological problem—the special nature of humans—to scientific beliefs—quantum mechanics. What happens if the science changes? We (rather, Russell) are left with egg on our faces. It is a bit like using mitochondrial Eve to argue for the truth of Genesis. If someone changes his or her mind, we are all in trouble. I do not like this way of reconciling science and religion.

My second worry concerns the actual act of intervening by God. I am not saying that I want to rule out miracles, whether these be Augustinian subjective or Thomistic objective, but I think that they should be reserved for salvation purposes. We are tainted by sin, and so God had to die on the cross and then rise again, for our salvation. That is one thing. It is another thing entirely, interventionist or not, to get God working in creation. Here I think Russell does have the same problem as the ID supporter. If God can and does do that which is good—create humans—why not at the same time avoid some of that which is bad? If God can move quantum events around to God's purposes, why not do a bit more and (for instance) avoid some of those horrendous mutations that leave people with a lifetime of sickness and pain? Why not wipe out many of the vile genetic diseases that afflict human beings? In other words, why doesn't God do more about the problem of evil, specifically natural evil? Leave the problem of moral evil on one side. I am not sure it can be solved, but this is not the issue here. The problem is that of natural evil. Now, ultimately I am with Russell when he tells us that at some point the Christian has to take on faith the belief that God has a full answer to evil, of all kinds. But until then it still is possible for us to peer through a glass darkly—as of course Russell is doing when he proposes NIODA. So, I want to know why a good God, who is all-powerful and can jiggle things around at the subquantum level, does not do a bit more and avoid the worst of natural evils.

If you are like me and keep God out of this, although you may not solve the problem of natural evil you do protect God against my specific charge. You simply say that this is not the way that God works and that bad mutations come about because God works through unbroken law. Then, as I have done before, you make an argument (probably Augustinian) as to why God creates and works through unbroken law and another argument (Leibnizian) as to why natural evil will come about. If mutations are going to do good things, you have to accept that they will sometimes also do bad things. That is the way of the world. (As I say, this does not solve the problem of natural evil. You could still ask why God creates at all, given the pain and suffering. But that is another matter. The question now is about the effects of letting God loose in the creation.)

Even if Russell gets what he wants—what I agree fully that the Christian needs—with respect to the arrival of human beings, he is still caught on the theodicy problem. Indeed, his solution to the human problem makes the problem of natural evil even worse. Are the problems then insoluble? I have to say that I do think that some of the Christian's problems are insoluble. The existence of other religions strikes me as devastating (I don't have the confidence of the Christian who says that other religions are just plain wrong), although as one who does not much care for natural theology anyway, because I would never let the arguments (for or against God's existence and nature) make the positive case, I am not now about to let the

arguments make the negative case. Ultimately, I think it is all a question of faith. Russell has it; I don't.

That said, however, I think Christianity has the resources to get out of the problem. It is a theological problem that demands a theological solution. God is outside time, so God could create billions and billions of universes—raise their number to the power of ten, if you like. For us, this is beyond inconceivable. For God, a thousand years are as a day. We know that humans could evolve from a natural system such as ours. It may be that it happens fairly often. Conway Morris thinks not, although Gould thought it quite possible and believed that there was intelligent life elsewhere in this universe (Dick 1996). Either way, it can happen because it has happened. So God can create, knowing that it will happen somewhere, sometime. How long it takes is irrelevant to God. Humans were bound to appear, and that is all God needs or cares about. To know it will happen is enough.

In the end, I think that Russell and other Christians can have their cake —hold to modern science—and eat it, too—believe that humans would appear naturally. They can do this without insisting that God's hands get dirty and having nonbelievers like me accusing God of making more difficult the problem of natural evil. Will Russell welcome my solution? My experience is that even the best people working on the science-religion relationship tend toward blindness when it comes to my suggestions. So let me conclude by praising a nonexistent God for the gift of rational thought, the value of which Russell so fully exemplifies. There are times when I think that there might almost be something to it all, after all!

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