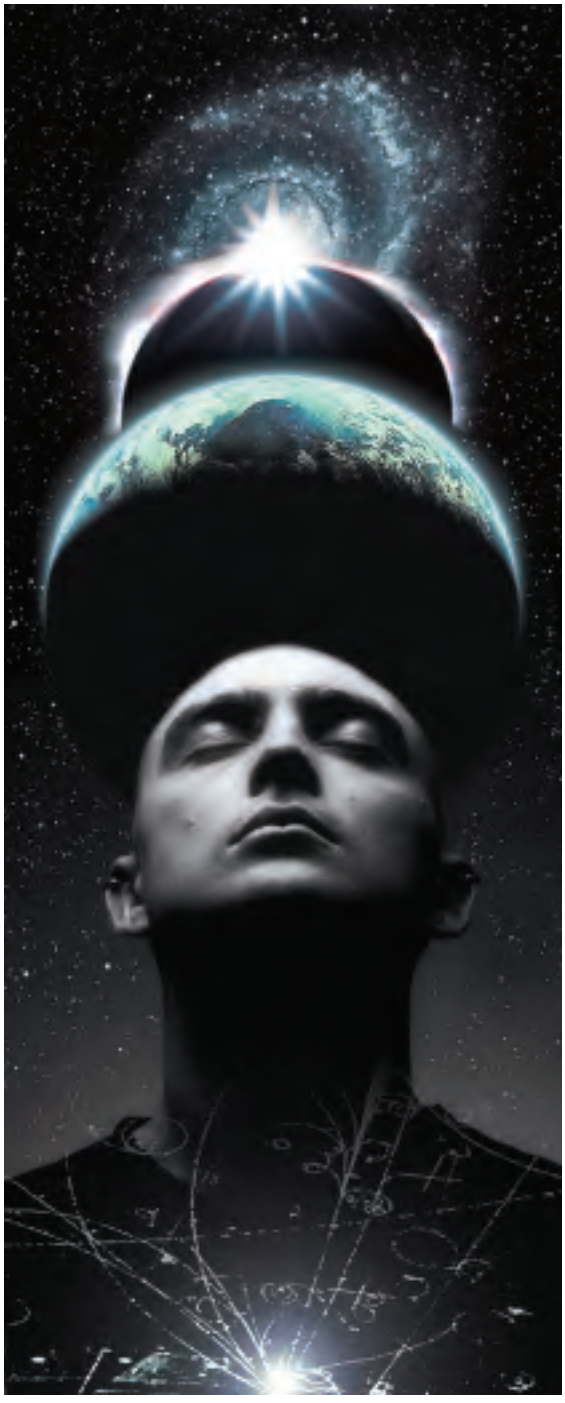
Participating with the Universe:



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An Interview with Brian Swimme

Brian Swimme, PhD, is a mathematical cosmologist, writer, and producer. His primary field of research is the nature of the evolutionary dynamics of the universe, and his central concern is the role of the human within the Earth community. He is on the graduate faculty at the California Institute of Integral Studies, and in 1989 he founded the Center for the Story of the Universe (www.brianswimme.org). Swimme has the wonderful ability to explain complicated scientific ideas in accessible language, and his passion and enthusiasm are contagious.

His works include *The Universe Is a Green Dragon* (Bear & Company, 1984), *The Universe Story* (with Thomas Berry, HarperSanFrancisco, 1992), and *The Hidden Heart of the Cosmos* (Orbis, 1996), as well as the DVD/video series *Canticle to the Cosmos* (Tides Center, 1990). Swimme, whose work has been influenced by Thomas Berry (to whom he dedicated *Green Dragon*), is just as awed by the mystery and magic of the universe today as he was twenty years ago when his first book was published. In the following interview, conducted by Susan Meeker-Lowry, publisher of the newsletter *Gaian Voices*, Swimme talks about the challenges we face in these troubled times and the role we each play in giving birth to a new form of humanity.

Susan Meeker-Lowry: How do you define cosmology?

Brian Swimme: Cosmology is the study of the nature of the universe, in particular the origins and development and even some speculations about the depth of the universe as a whole. Historically, cosmology was more a wisdom tradition, part of the philosophical and religious traditions. But science has discovered its own way into these big questions, and it's fascinating to compare the scientific story with the more traditional ones.

And then there's the question of how the human relates to the universe as a whole. For centuries scientists were trained to separate the human out, to understand the universe as it was in itself. Rocks? What are they really like if you take out the human, with our intuitions and poetry and such? So scientists have been slow to get to the question about the nature of the human. The first scientist to make a major contribution in this area was Pierre Teilhard de Chardin. Trained both in geology and theology, he realized that the geological story of Earth was an amazing arena for reflection on the nature of the human. I very much feel my own work is in his tradition.

SML: Your first book, *The Universe Is a Green Dragon*, was accessible to someone like me who isn't scientifically inclined. And it seemed to give people permission to see rocks or soil or stars as alive—you use the word "numinous"—as opposed to dead matter that doesn't make any difference except for what we can do with it. It almost felt like a fairy tale.

BS: Fairy tale is an appropriate way to think about it. There's something so magical about the universe that can't be easily expressed, so you almost feel compelled to say things that are reminiscent of fairy tales. In the modern period we became so deadly serious about the nature of matter; we robbed it of all of its magic. I'm not putting the magic back in; I'm simply thinking about what we've discovered. From my standpoint, it's the scientists who have discovered the magic of matter. I feel like I'm just reflecting on it. And it still astonishes me.

SML: How can we participate with the universe?

BS: The universe has been at work for 13.7 billion years. If you can get a feel for what the universe is about, then you can ask the question, "How can I as a human participate in it?" I mentioned de Chardin as one of the first scientists to reflect on the universe in a meaningful way. Another was Alfred North Whitehead, who was around at the same time as Teilhard and just as significant. Where Teilhard approached the universe from the perspective of theology and biology, Whitehead's approach was through physics. He became convinced that the universe was about several things. I'll name two.

First was depth experience. What he meant by this is how the universe is bringing more and more aspects of itself together in a particular place. For example, a lizard eats and digests, and it can do this because a billion years ago microorganisms invented the process of digestion. The information was stored in the DNA, so today the lizard has the benefit of all those previous moments. In other words, those moments in the past are brought back to life in the present with the lizard. Whitehead saw this type of movement as the desire of the universe to actually feel itself in a deep way everywhere. *[laughs]* Isn't that great? So how can the human participate in that? Well, one way is by learning—not only do we have all of these billions of years of life present in our bodies but we also have the possibility through deepening our consciousness to bring in what was going on with, for example, the ancient Greeks or Egyptians. Learning for its own sake, as opposed to just preparing us to do something (which it does anyway), is participating with the movement of the universe.

Second, Whitehead believed the universe is about bringing forth ever greater beauty. Beauty, of course, is a mysterious word, but he was speaking here about the way in which the universe complexifies. It complexifies in a way that is elegant: The more complicated it gets, the simpler it becomes. Humans can participate in this aspect of the universe by, for example, giving shape to our habitat, to our towns and cities, so they merge almost seamlessly with the complexity of the natural world. The ideal would be for our architecture, economics, chemistry—all of these—to become enhancements of the elegant complexities of the universe in which we find ourselves.

SML: Rather than trashing everything.

BS: Precisely. When we have a society based on accumulation, which is the great goal of our system—to accumulate capital—and we base a civilization on it, we end up creating systems that actually work against the universe.

SML: I think one of the most important things we can do is to open people to a different way of perceiving the universe and our role here—however you have to do that. Like a trickster, I guess.

BS: Yes. We find ourselves in a world that is woven with these various forms of distortions and pathologies. How can we become so awake that we can become tricksters and participate in unveiling these distortions?

SML: You talk about the generosity of the sun and the joy of trees. It doesn't seem to me that you're talking about the joy that *you* might take in the tree; rather, you're actually talking about the joy experienced *by the tree*. Is that how you mean it?

BS: Absolutely. And with regard to the sun, some people get upset because they think I'm suggesting the sun is like a person, which I'm not. The sun is radiant energy, and we talk about the sun using terms such as a "fusion reaction" or the second law of thermodynamics. These are very particular and wonderful ways to talk about what's going on with the sun. And when we talk about a human bestowing a gift on another, we say "generosity." It's good to have different words for different things.

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—Brian Swimme

I'm amazed by the differences between the sun and the human, *as well as* the similarities we've tended to ignore. This goes back to scientists being driven to understand what things were like separate from any connection to the human. In a way, scientists conducted an experiment in consciousness where they stripped away all their human qualities. They learned a lot, but it was skewed, coming as it did from the perspective that the human is ontologically separate from the rest of the universe. The incredible thing is now we know that the stars actually gave birth to us. How incredible is that? Whatever we are is somehow a further development of what the star is. This is where Teilhard is so great. His point of view is that whatever a human is, it is in any case the development of powers and dimensions and qualities that were present in a different form in earlier beings like stars. So when I say that the sun is generous, I mean that there is a power in the sun that will over time be developed into a generous human. A primal form of generosity is the sun radiating light. It's not aware of it, but it is manifesting it.

SML: I want to talk about timing. You've written about how things happen in the right time. If something is off just a little bit, it's not going to happen. And yet, when it's right, nothing will stop it. Thomas Berry talks about timing in the context of evolving into the Ecozoic Era, and he reassuringly tells us that we should not doubt that we have been given what is needed to do this. I believe this, but it can be a hard sell and doesn't even seem logical given how much needs to be done on such massive scales. But my sense is that there's powerful magic (for lack of a better word) in the universe, and humans—being a part of this magic—can wake up and participate with it, which will help us transcend the logic and make it possible.

BS: That's what I believe, but my way of saying it is different.

SML: I'd love to hear your way because people roll their eyes at me.

BS: *[laughs]* Well, they might roll their eyes in the other direction after listening to me. Timing is one of my favorite topics. I go into it in "Show Ten" of *Canticle to the Cosmos*. Timing is one of those areas where the magic of the universe comes out so strongly. You can choose different moments, but my favorite is the birth of the galaxies. In the early, early universe, it wasn't possible to create galaxies—and it's not possible today either. The very early universe was too dense, and now it's not dense enough. But there was that one moment when the density was just right, and a trillion galaxies came into existence.

When did that happen? The estimates are around 400 million years after the birth of the universe. How did the universe know the time was right? There's a cosmological dimension of time that expresses itself in creativity.

The universe, in some mysterious way, knows when it's time to create galaxies—and the same thing happened with the birth of life. There is an intrinsic sense of time in the universe, which is absolutely in us because everything about us is universe. We're made of the universe, and so that intrinsic sense of timing is in our atoms—way, way deeper than consciousness.

SML: Then there are people who take the perfect timing idea to say that if everything is perfect, then I don't have to worry or make any special effort; everything is unfolding the way it's supposed to. Enlightened contentment, you could call it.

BS: I think it's a coincidence of opposites. We live in a situation so disastrous. In literally millions of years, this is the worst time on Earth to be alive. And yet, what's so bizarre is that it's also the greatest time. It's so exciting and dwarfs anything I'm aware of in the history of humanity. There are all kinds of responses, and one is to just think, "Well, everything is as it should be, and I don't have to do anything." But at the same time, there is this deep urgency we feel, and that too is evidence that things are as they should be. Here we are feeling this deep urgency, and we know we have to pour all our energy into it. I believe that all humans know in a deep, ineffable way exactly what is required of us—even down to being called to do very specific things. We don't get a printout or specific instructions, but we do know what gives us a deep sense of joy—and that's what we're supposed to be doing. However discouraging it can be, laced right into the discouragement is this sense of power that comes from contacting the deepest energies of the universe.

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SML: In *The Hidden Heart of the Cosmos*, you wrote about the expansion of the universe and how, for instance, I'm not moving but everything is getting farther away.

BS: If I had to pick one discovery to call the most mind-blowing, it would probably be the nature of space. For centuries we thought of space as empty. Then we discovered that space is actually teeming with activity. For instance, molecules of air and particles of light are soaring about, and what's even more bizarre is that particles are actually foaming into existence. Where are they foaming out of? Well, they're just foaming out of space. They're foaming out of the in-between. They're not coming out of a molecule of air or a bit of energy like a photon of light; they're coming forth out of the in-between. There's no way to say it to make it seem reasonable.

SML: And if what's happening to the universe is happening to the human, then . . .

BS: David Bohm talks about the implicate order, which is a very powerful idea. "Implicate" meaning that it's not there the way a molecule of nitrogen is there, rather it's in between. The implicate order contains both the essence of all that has happened in the universe and the ocean of possibilities that might yet happen. And in this understanding of the universe, even the particles that are explicit are vibrating. They vibrate out of space into existence, and then they melt away into the implicate order. As opposed to the Newtonian idea that an atom shows up and doesn't change, Bohm's idea says that the atom is constantly coming forth. And that would be true of our bodies. They're vibrating out of this deep realm. Bohm's interpretation of our moment would be that right now humans are coming forth out of a ground that is different. It is different because it contains all the experiences of the past up until now. Humans today are aware of global warming, of the suffering of animals, of the possibilities of building ecocities. We're beginning to become aware. And it's a moment for actually giving birth to a new form of humanity. Thomas Berry says the challenge of our time is the reinvention of the human at the species level, which makes it clear that we're called to do something monumental and magnificent. That's why it's so great to be alive. I mean, reinvent the human—wow! Compare that to building a steam engine.

SUSAN MEEKER-LOWRY *is a writer, editor, and organic gardener. She is the author of* Economics As If the Earth Really Mattered *(1985) and* Invested in the Common Good *(1995), both from New Society Publishers. She currently publishes* Gaian Voices: Earth Spirit, Earth Action, Earth Stories *and can be reached through her Web site,* www.gaianvoices.com.

"Participating with the Universe: An Interview with Brian Swimme" by Susan Meeker-Lowry first appeared in *Shift: At the Frontiers of Consciousness* (No. 15, June–August 2007, pp. 32–36), the quarterly publication of the Institute of Noetic Sciences (IONS), and is reprinted with permission of the author (www.gaianvoices.com) and IONS (Websites: www.noetic.org and www.shiftinaction.com),