

Awakening to the Universe Story

Part I: Comprehensive Compassion

An interview with **Brian Swimme**

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Introduction

For mathematical cosmologist Brian Swimme, the universe is a continuous, radiant, numinous revelation. Contemplating the wonders of the unfolding creativity of the cosmos is a mystical, ecstatic, awe-inspiring event. And if you speak with him, read his books, or watch his educational video series—it's contagious. A specialist in the evolutionary dynamics of the universe, Swimme has made it a central aim of his work to convey the new story of the universe—the mind-stretching story of our fourteen billion years of cosmological evolution that has been revealed by the scientific discoveries of recent decades. In 1989 he founded the Center for the Story of the Universe at the California Institute of Integral Studies (CIIS), where he is also a professor of cosmology. Swimme tells the story of the universe in the hope that this vast vision will catapult us out of the myopia of our narrow primate minds. The story of the universe, across the sweeping expanses of space and time, he believes, is the deepest story of ourselves. Swimme is particularly interested in the unique potential of our present moment in the march of time—for now is the moment, through the evolution of the unique self-reflective capacities in human consciousness, that the universe can become conscious of itself. And, most significantly for our current planetary crisis, now is the moment in which we can begin to consciously "reinvent the human as a dimension of the emergent universe" and evolve into a mode of being human in which we are deeply in touch with, and experience a comprehensive compassion and responsibility for, all of life.

Swimme received his Ph.D. in mathematical cosmology from the University of Oregon in 1978. He taught at the University of Puget Sound for a number of years before moving to New York City to study with Thomas Berry at his Riverdale Center of Religious Research. Swimme and Berry then began a longtime collaboration, the fruits of which include *The Universe Story*, co-written in 1992. Swimme returned to teaching at Holy Names College in Oakland, California, where he taught for seven years and co-wrote *Manifesto for a Global Civilization* with Matthew Fox before joining CIIS. He is also the author of several other books, including *The Universe Is a Green Dragon*. Swimme travels regularly to speak on cosmology and ecology at conferences and organizations, including the United Nations, UNESCO, and the State of the World Forum.

I had the pleasure of speaking with Dr. Swimme and having the vistas of my imagination stretched to infinity at Harvard University last October, where he was participating in a conference on ecology and religion. As we sat down to begin the interview, he told me he had just that minute returned from a conference event at Thoreau's Walden Pond. As Swimme brought the grandeur and majesty of the cosmos to life, speaking about the birth of galaxies with the intimacy and amazement and eloquence of the Transcendentalist poets when waxing ecstatic about leaves of grass or a Concord pond, I knew I was meeting another nature mystic, but a nature mystic of the twenty-first century, whose sphere of nature includes the farthest star.

Interview

What Is Enlightenment: *What do you feel is the most pressing crisis facing humanity today? What are the planetary issues we most need to wake up to and address?*

Brian Swimme: I think the fastest way to wake up to what is happening on the planet is to think in terms of mass extinction. Every now and then, the earth goes through a die-off of the diversity of life. Over the last half-billion years, there have been five moments like this. We didn't know about this two hundred years ago; we didn't have the slightest idea that the earth did this. Now we've discovered that around every hundred million years, the earth went through these amazing cataclysms. And just within the last thirty to forty years, we've discovered that the last one, which eliminated all the dinosaurs and ammonoids and so many other species, was caused by an asteroid hitting the earth. This happened sixty-five million years ago. There was no awareness of this any previous time in human history. You look through the Vedas, you look in the Bible—it's nowhere. But at the same time as we're discovering this, we're discovering that *we're causing one right now*. Two years ago, the American Museum of Natural History took a poll among biologists. They asked a simple question: Are we in the middle of a mass extinction? *Seventy percent said yes*. A mass extinction. You can't open your eyes and see that. It's a discovery that involves the whole. Our senses have evolved to deal with the near-at-hand, and *this* is a conclusion that involves the whole planet.

So now we're *just* discovering that we're in the middle of a mass extinction. We happen to be in that moment when the worst thing that's happened to the earth in sixty-five million years is happening now. That's number one. Number two, we are causing it. Number three, we're not aware of it. There's only a little splinter of humanity that's aware of it. The numbers are this: At the minimum, twenty-five thousand species are going extinct every year. And if humans' activity were otherwise, or if humans weren't here, there would be one species going extinct every five years. We've pushed up the natural extinction rate by the order of something like a hundred thousand times.

The point is that we haven't been prepared to understand what an extinction event is. We've had all these great teachers. We've had tremendously intelligent people, going back through time, but you can look, for example, through all the *sutras* or Plato's dialogues, and they never talk about an extinction. As a matter of fact, I don't think that Plato or the Buddha were even capable of imagining an extinction. First of all, at that time we weren't aware of evolution. We weren't aware of the whole process, so the idea of extinction didn't make sense. When every now and then scientists or other humans would find these bones, they would assume that these creatures were actually still in existence elsewhere, you know, on another part of the continent. So there wasn't the conception of extinction. We're only now having to deal with what it means to actually eliminate a form of life.

I have a new idea for a way to help people understand this. Christians have been reflecting

upon Jesus' crucifixion for two thousand years. If you had happened to be around back then, for example, in Alexandria, it was a cosmopolitan world and they had news of what was going on, and you heard about some Jewish rabbi being killed—big deal. It wouldn't really have had an impact on you. But then, for two thousand years afterwards, Christian theologians are thinking about it. So my latest thought is, maybe for the next *million* years, humans will be reflecting on what it actually means for the earth to go through this extinction process. It may take us that long to fully take it in, with all of its ramifications. I don't understand it. It's vastly beyond my mind. I think that we're not prepared to really understand what it means. Right now, just to get a glimpse of it is tremendous. That's all I'm hoping for. If we just get a glimpse of it, we can begin to think at the level that's required to deal with it effectively.

WIE: *What do you believe is the solution to this crisis?*

Swimme: It would be to reinvent ourselves, at the species level, in a way that enables us to live with mutually enhancing relationships. Mutually enhancing relationships—not just with humans but with all beings—so that our activities actually enhance the world. At the present time, our interactions degrade everything.

You see, the cartoon version of our civilization is that we're all materialists, so we don't have a sense of a larger significance beyond us. In our materialistic Western culture, our fundamental concern is the individual. The individual, and accumulation—of whatever it might be. Is it fame? Is it money? We put that as the cornerstone of our civilization. That's how we've organized things. Now there are mitigating factors, but I'm giving a cartoon version. What's necessary is for us to understand that, really, at the root of things is community. At the deepest level, that's the center of things. We come out of community. So how then can we organize our economics so that it's based on community, not accumulation? And how can we organize our religion to teach us about community? And when I say "community," I mean the whole earth community. That's the ultimate sacred domain—the earth community.

These are the ways in which I think we will be moving. How do you organize your technology so that as you use the technology, the actual use of it enhances the community? That's a tough one. So long as we have this worldview in which the earth itself is just stuff, empty material, and the individual is most important, then we're set up to just use it in any way we like. So the idea is to move from thinking of the earth as a storehouse to seeing the earth as our matrix, our fundamental community. That's one of the great things about Darwin. Darwin shows us that everything is kin. Talk about spiritual insight! Everything is kin at the level of genetic relatedness. Another simple way of saying this is: Let's build a civilization that is based upon the *reality* of our relationships. If we think of the human as being the top of this huge pyramid, then everything beneath us is of no value, and we can use it however we want. In the past, it wasn't noticed so much because our influence was smaller. But now, we've become a planetary power. And suddenly the defects of that attitude are made present to us through the consequences of our actions.

It's amazing to realize that every species on the planet right now is going to be shaped primarily by its interaction with humans. It was never that way before. For three billion years, life evolved in a certain way; all of this evolution took place in the wilds. But now, it is *the decisions of humans* that are going to determine the way this planet functions and looks for hundreds of millions of years in the future. Look at an oak tree, look at a wasp, look at a rhinoceros. The beauty of those forms came out through this whole system of natural selection in the past. But the way they'll look in the future is going to be determined primarily by how they interact with us. Because we're everywhere. We've become powerful. We *are* the planetary dynamic at this large-scale level. So can we wake up to this fact and then reinvent ourselves at the level of knowledge and wisdom that's required? That's the nature of our moment. Our power has gotten ahead of us, has gotten ahead of our consciousness. This is a challenge we've never faced before: to relearn to be human in a way that is actually enhancing to these other creatures. If you want to be terrified, just think of being in charge of how giraffes will look a million years from now. Or the Asian elephant. Biologists are convinced the

Asian elephant will no longer exist in the wild. Even right now, the cheetah can't exist in the wild. That means that the Asian elephants that will exist in the future will exist primarily in our zoos, likewise cheetahs. So the kinds of environments we make for them are going to shape their muscles and their skeletons and all the rest of it. I'm talking over millions of years. This is the challenge that is particular to this moment, because this is the moment the earth goes through this major phase change—the dynamics of the planet are beginning to unfurl through human consciousness.

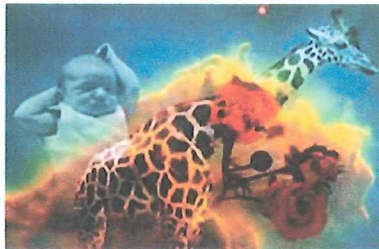
That's why I'm thrilled by your asking these questions. You see, I *do* think that waking up, enlightenment, *can* save our world, *can* save the planet. Because we're doing things that none of us wants to see happen. And we're doing it because we're unaware. So if we can wake up and train all of our energies around this, then I have deep confidence that tremendously beautiful, healing things will happen.

WIE: *You often speak about the fact that we are at a unique juncture in human history because we now have knowledge of the fourteen billion years of cosmological evolution that brought us to this point—and that this knowledge carries with it a responsibility that we never before imagined. Can you give a basic outline of the vast scope of this evolution?*

Swimme: It's really simple. Here's the whole story in one line. This is the greatest discovery of the scientific enterprise: You take hydrogen gas, and you leave it alone, and it turns into rosebushes, giraffes, and humans.

WIE: *That's the short version.*

Swimme: That's the short version. The reason I like that version is that hydrogen gas is odorless and colorless, and in the prejudice of our Western civilization, we see it as just material stuff. There's not much there. You just take hydrogen, leave it alone, and it turns into a human—that's a pretty interesting bit of information. The point is that if humans are spiritual, then hydrogen's spiritual. It's an incredible opportunity to escape the traditional dualism—you know, spirit is up there; matter is down here. Actually, it's different. You have the matter all the way through, and so you have the spirit all the way through. So that's why I love the short version.



Okay, the longer version: Thirteen billion years ago, according to the most recent guess, the universe comes forth as elementary particles, screaming hot. It's not only trillions of degrees hot, it's also a million times denser than lead. So the universe doesn't begin as fire. It begins as this incredible dense, hot—we can't even imagine it. We just know it as some numbers. And then it begins to expand. After three hundred thousand years, it cools enough to form atoms. Those are the hydrogen atoms. And as the matter continues to cool and expand, it also begins to draw itself together into these huge clouds that we call galaxies.

When the universe is about a billion years old, the galaxies flutter into existence, *whooshh*, like snowflakes falling—one hundred billion galaxies. It was an incredible moment because that was the *only* time in the history of the universe when galaxies could form. Before that, it was way too dense and hot. After that, it's too thin and spread out. Stephen Hawking discovered something incredible. If you look at the expansion of the universe, there's all this energy, right? It's just exploding out, and also, at the same time, you have this bonding force, gravity, that's holding it together. You've got these two opposing forces. If the gravitational force would have been slightly stronger, it would have crushed the whole universe into a black hole within a million years. Or, if the gravitational force had been weaker, it would have exploded apart and it wouldn't have formed galaxies. It's an incredible balance. The difference is one part in 10⁵⁹—which is a trillionth of a trillionth of a trillionth of one percent. That's how delicate it is. It's more delicate than

dancing on the edge of a knife.

Later on, the galaxy is complexified in that the stars themselves burn, and the stars, to burn, transform the elements in their core. So the hydrogen is transformed into helium. And later on, it gets a lot hotter, and the helium is transformed into carbon, and so forth. All of the elements are created in the middle of the star, which then explodes. So the next star that's formed is formed out of these more complex elements, and then you have the possibility of planets. All of the elements of our body, every one of them, was forged out of a star. Walt Whitman had an intuition about this when he said, "A leaf of grass is no less than the journeywork of the stars." And you think, how did he come up with that? Well, that's called self-knowledge. In other words, a star gave birth to the elements that then assembled themselves in the form of Walt Whitman. So you could say that Walt Whitman had a deep memory of where he came from.

WIE: *That's an amazing intuition.*

Swimme: Isn't that something? How could he write that down? Likewise, when Einstein discovered the general theory of relativity, he discovered it from within. There was no data on the expansion of the universe or anything else. He said he just went into his own visceral movements—a strange way of thinking about creativity—and he paid attention to what was going on within, and he gave birth to the gravitational equations we use now. This is what I think Whitman did. He penetrated the depth of his own bodily reality and had this intuition about stars. And we've now discovered the empirical details about this. I just *love* that—everybody comes out of the stars.

So, to continue with our story—in certain planetary systems, life forms. That's a *huge* transformation. Life begins around three and a half billion years ago, and then it begins to complexify around seven hundred million years ago. And then, one strange little lineage forms—the worms. The worms actually develop a backbone and a nervous system. We're so impressed by brains. The *worms* created the brains. You see the theme I'm developing here? Hydrogen. It becomes *us*. All of matter is spiritual. And if the worms can create the brains, then creativity is everywhere!

Then we have the advanced life-forms—more advanced in the sense of more complex. There are the various stages of humanity that we've gone through; our consciousness has developed. And then: We have *this* moment. Now we're discovering ourselves in the midst of this story. And you see, all that went before was *necessary* for us to actually discover ourselves in the universe right now—all of the development of mind and instrumentation and so forth.

But the way I want to connect the story for you is to go back to the birth of the galaxies. There was one moment when the galaxies could form, not before or after. That's like our moment right now, I think. See, this is the moment for the planet to awaken to itself through the human, so that the actual dynamics of evolution have an opportunity to awaken and to begin to function at that level. It couldn't happen before, you know. And the amazing thing is, it probably won't happen afterwards. If we don't make this transition, most likely the creativity of the planet will be in such a degraded state that we won't be able to make that move. The chilling thing is that, in the universe, the really creative places *can* lose their creativity. We talked about the birth of the galaxies. There are two fundamentally different forms of galaxies, spiral galaxies—galaxies with spiral arms—and elliptical galaxies, which can be larger or smaller, but which don't have any internal structure. The galaxies that have spiral arms have the creativity to create new stars. So stars form. They create these elements. They disperse. Then they form another one, another star system, and it keeps going. But in elliptical galaxies, they can't. In our current understanding, spiral galaxies have collided at certain times and have destroyed their own internal structure and become elliptical galaxies. Elliptical galaxies are just sitting there, and the stars go out one by one, and that's it. So you can actually move off from the mainline sequence of creativity in the universe.

Now here we are in the middle of the Milky Way galaxy. There are two hundred billion stars. Lots of them have planets. Maybe a lot of them have intelligent life. There are approximately one hundred billion galaxies in the

known universe. Obviously, lots of stars; most likely, lots of life. Who knows? But if you think of it in terms of the creativity of the universe, it may be that a lot of planets will go through the transition that we're facing now. And if they don't make it, they'll die out—like the elliptical galaxies. So the challenge before us as humans is to see that what we think of as small is immense. The very form of our consciousness has a cosmological significance that we didn't know about before. I've talked about it in an evolutionary sense, in terms of the animals and so forth, but it may go beyond that. It may have immense implications for the galaxy as a whole.

So that would be a way of thinking about the past thirteen billion years of the story—to think of the challenge before us as being a cosmological challenge. We've gone through transitions in the past that *could* have gone the wrong way. Then our planet would maybe still be alive, but certainly not at the level of complexity we see about us today. I don't want to suggest in any way that what's taking place is somehow engineered to happen. It's more of an adventure.

WIE: *This new knowledge of the history of the universe certainly stretches the limits of your imagination.*

Swimme: Yes. That's just it. Imagine what it was like when Copernicus showed up in town and told people for the first time, "Hey, you know what? The earth is going around the sun." Try to take that in. We failed to. We couldn't handle it. And so we split: The scientific venture went one way, and the religious/spiritual another. In one sense, we're at this same juncture. Can we find the resources to take this in and move with it? It *is* a challenge for the imagination.

WIE: *What is the most important catalyst for the kind of change of worldview you've been speaking about?*

Swimme: You know, that's a great question. I wish I had an adequate answer. I've thought about it, and my conclusion is that there are multiple catalysts. For some people, it's knowledge, just *hearing* about this new story of the universe—so that's what I do in education. But for others, it's personal tragedy. Or maybe having an early commitment to the beauty of a place, from childhood, and then coming back and seeing it destroyed. Some people awaken through varied forms of meditation; other people use drugs. I see multiple catalysts. I don't have an adequate answer perhaps, but the catalyst for *me* was knowledge. It was just being completely amazed at what we now know. So that would be my own particular path, but I don't privilege one over the other because I've met so many people who are beginning to get a sense of this and they come from a variety of directions.

WIE: *You often speak about the importance of activating what you call "comprehensive compassion." What do you mean by "comprehensive compassion"?*

Swimme: Well, when we use words like compassion, we tend to limit them to the human world. And part of this goes back to what I said before, that we think of the rest of the universe as being *stuff*, and we don't use words that are spiritual or warm or emotional concerning them. The scientific tradition has always called that "projection"—projecting your own qualities upon the universe as a whole or upon nature. And that's supposed to be a terrible thing to do. But I think that's breaking down as we begin to realize that it's all one energy event. It's one journey, one story, so that the qualities that are true of the human are in some way or another true of other parts of the universe. So I talk about compassion as a multilevel reality. It's not just something that's true of humans.

My interpretation is this. I think that gravitational attraction is an early form of compassion or care. If there weren't that kind of care at the foundation of the universe, there would be no formation of galaxies—and we wouldn't be having this discussion. This care or compassion begins to show up in the organic form when you have a bond developing between a mother and her offspring. You know, for a long time, there's no bond. There's no care—at least no visible way of seeing care—for instance, with bacteria. They replicate. There could be care there, but we haven't recognized it yet. But by

the time you get to mammals, two hundred and twenty million years ago, you have this bond between the mother and the child. That arrives as a genetic mutation. But because of that, the offspring have a higher chance of surviving. So that mutation then spreads and starts to characterize the entire population. That's just the bond between a mother and an infant. Then other bonds develop between siblings, and they have a higher chance of survival. All of what I'm saying fits into Darwinian biology. This isn't outside of mainstream science. What it says is that the dynamics of Darwinian biology favor the appearance of compassion. It shows up between mother and child. It shows up between siblings, and it even develops between kin groups. And it starts to spread.

Now the human comes into existence. We are the first species that actually has the possibility of caring about *all* of the other species. You see, chimpanzees are our closest relatives, and they certainly care about one another, but their care doesn't extend over in any visible way to other species, even though they may share territories with baboons. I've asked naturalists if they've seen a chimpanzee take care of a baboon, and they haven't. But with humans, suddenly you have the possibility, largely through the human imagination, of actually caring. I mean, I care. I care so much about the cheetahs. And I've never even been around a wild cheetah. My point is that the human being is that space in which the comprehensive compassion that pervades the universe from the very beginning now begins to surface *within consciousness*. That's the only difference. We didn't *invent* compassion, but it's flowing through us—or it could. The phase change that we're in seems, to me, to depend upon that comprehensive compassion unfurling in the human species.

WIE: *You're suggesting that throughout evolution, Darwinian natural selection has favored the formation of bonds of care and concern, but that now, in the human, we have the opportunity and the responsibility to extend that care and concern consciously beyond what is already genetically determined. In your video series The Earth's Imagination, you say: "It's terrific that you love your family members, but what about the species that are outside the reach of your genes emotionally? That's the challenge. Doesn't it seem ungrateful of us if we are just carried along by the emotional bonds that have been established by the past? What if we devote ourselves to developing a more profound concern for all species?" Can you speak about how to actually do this—how to extend the reach of our care and concern?*

Swimme: My conviction is that the first step is just paying attention. What's amazing is that, as humans, if we dwell on anything, after a while we become fascinated by it. It doesn't matter what it is. The ability to dwell on things is uniquely human because we don't have such fixed action programs as other species do. We can forget about everything else and just dwell on something. I call it the power of gawking. We can pay attention to whales or to the hummingbirds and just become fascinated by them. It's noticing in a deep way, or contemplating, and my intuition is that as humans allow themselves to be fascinated by the other creatures, these species will awaken the psychic depths in the human that respond to their beauty. And then we become convinced that in some amazing way, they are essential to us. We can become amazed by how essential they are for our zest, our sense of well-being or happiness. Chief Seattle said that if the animals were not here, we would die of loneliness. I think that a deeper feeling of care begins with allowing ourselves to move into awe—with all of the different creatures, no matter which ones we've picked. If we would attend to them, we would see their colossal grandeur. Abraham Heschel said that awe is the first step into wisdom. You can just sit and watch fish and think of how they've developed over hundreds of millions of years and imagine what they're experiencing, and after awhile you're sunk into contemplation of ultimacy. This is what I think is the first step toward compassion.

WIE: *Many spiritual traditions speak about transcending self-centeredness and expressing profound care for others as being the whole point of the spiritual path. Changing our fundamental motivations and making the leap from fundamental self-concern to a condition in which one's life is based on genuine care and concern for the whole of life is quite a radical transformation. Spiritual paths committed to this kind of transformation usually involve enormous dedication, and often years of extensive spiritual practice. Yet the situation that we're in now on this planet is critical. Do you*

think that it is still possible for enough people to make this leap quickly enough to see us through our current crisis?

Swimme: Well, I think the *universe* is carrying this out. But we get to participate in it consciously. And in a real sense, it's very important that we participate. At the same time, it's important to remember that *we're* not doing it. I mean, the universe has been working on this for a long time, and right now, it's exploding within human consciousness. But we're not in charge of it. So I haven't got the *slightest* idea if we have enough time. That's almost a secondary question to me. It just seems so *deeply* right that we be thinking about this and working on this. But I think all of the spiritual traditions are going to be accelerated as they learn about this new cosmology and this moment that we face as a human species. There'll be an amplification taking place. So, it could go very quickly. Or it might take thousands of years. I don't know.

WIE: *Your vision of spiritual awakening is an embrace of the cosmic evolutionary journey of the universe as ourselves and a shift from seeing ourselves as separate individuals to identifying with the universe itself as the greater Self. What do you think about the Eastern mystical traditions that direct us to solely look within for enlightenment, and about statements such as this one by renowned Hindu sage Ramana Maharshi: "All controversies about creation, the nature of the universe, evolution, the purpose of God, etc., are useless. They are not conducive to our true happiness. People try to find out about things which are outside of them before they try to find out 'Who am I?' Only by the latter means can happiness be gained."*

Swimme: I can only tell you my orientation. It's just that there are so many things that we care about, that we carry in our hearts, that we want to help. People are suffering. Animals are suffering. So how can I interact in a way that would be helpful? That's my focus. All that I think about is somehow related to that. Just to be responsible and to participate in a process that will deepen joy. That's the only way I can put it. That's my high hope. There can be such a tendency for the individual to focus on "my enlightenment" and so forth. But it just doesn't seem to be what is really needed right now. Or it's not enough.

Interview by Susan Bridle