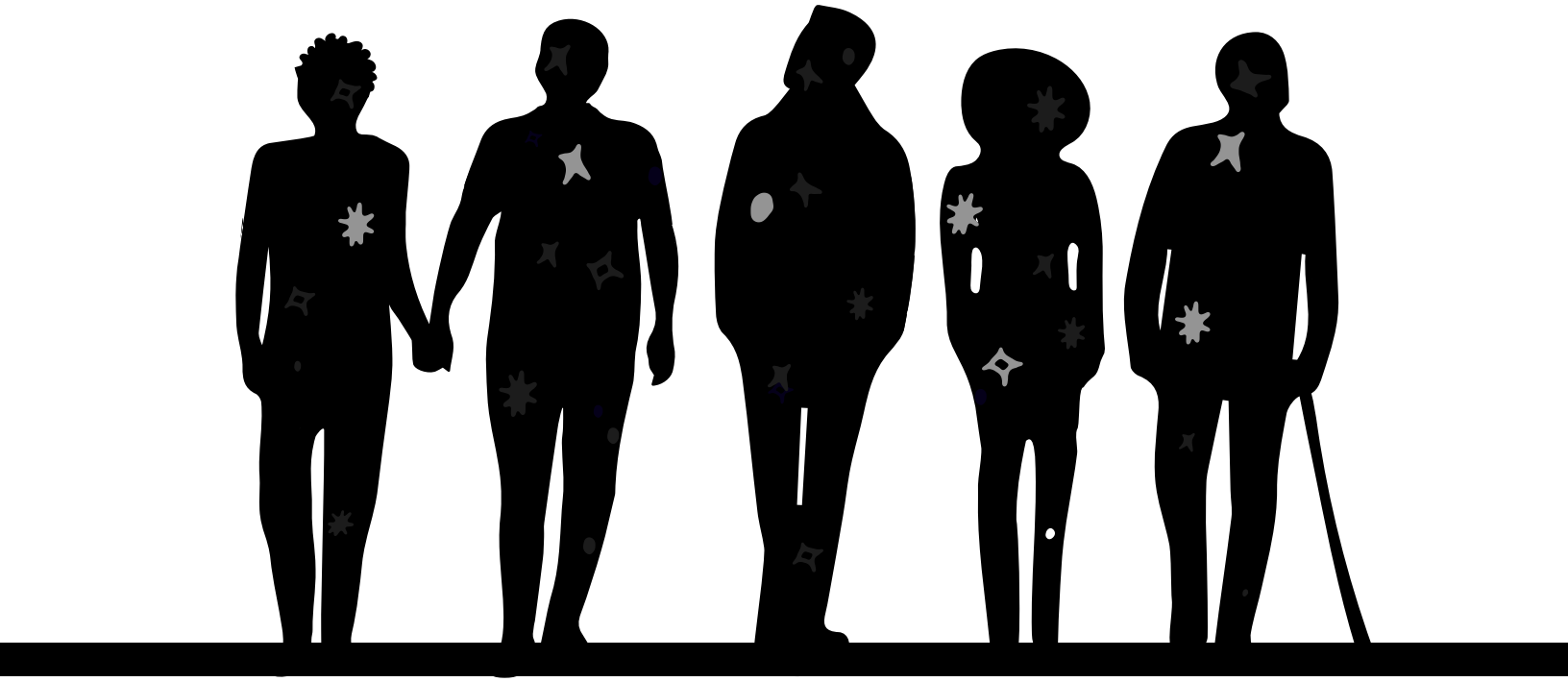
The Cosmic We

Episode 7:
Exploring the Relational Heart of the Cosmos

with Brian Swimme



from the CENTER FOR ACTION AND CONTEMPLATION

Brian Swimme: It's a spiritual change. It's the recognition that human mentality is not just for humans. Human mentality has to accept the responsibility that our decisions are determining the evolution of a planet. So we have to learn to think at that level, it requires a new mind and a new heart.

Donny Bryant: This podcast explores the mystery of relatedness as an organizing principle of the universe and of our lives.

Barbara Holmes: We're trying to catch a glimpse of connections beyond color, continent, country, or kinship. And we're going to do this through science, mysticism, spirituality, and the creative arts.

Donny Bryant: I'm Donny Bryant.

Barbara Holmes: I'm Barbara Holmes. And this is Cosmic We.

Barbara Holmes: Brian Swimme is Director of the Center for the Story of the Universe and a professor at the California Institute of Integral Studies in San Francisco. He received his PhD from the Department of Mathematics at the University of Oregon in 1978 for work in gravitational dynamics. Dr. Swimme is the author of The Hidden Heart of the Cosmos, The Universe Is a Green Dragon. He's also a co-author of The Universe Story, which is the result of a 10 year collaboration with the late Thomas Barry. Dr. Swimme also created educational video series Canticle to the Cosmos, The Earth's Imagination, and the Powers of the Universe. And most recently, he co-wrote and hosted the 60 minute film Journey of the Universe, broadcast on PBS television stations nationwide. The most important thing I want to say about Brian is that he is a storyteller, a scientist who invites lay people like myself to consider the cosmos in our own cultural context and to consider our place within this vast reality.

Barbara Holmes: Welcome Brian. Is there anything you want to add to, or correct about that introduction?

Brian Swimme: It was glowing. It was way too positive. Thank you, Barbara. Great to be here.

Barbara Holmes: Great to have you. Dr. Swimme, if we consider that a cosmology is just a story of where we've been and where we're going, can you help us to understand where we are on that timeline?

Brian Swimme: Yeah, I can. There'd be different ways of talking about it, but I would say one way is that we are 13.8 billion years after the birth of the universe. That's taking the grand view. If we come closer to home here on Earth Day, we are part of the earth community, which began four and a half billion years ago. Then zeroing in further, we're part of an amazing group of animals called the primates, and the primates have been here and evolving for 70 million years. And then we come to the human species. What does it mean to be a human? And this is an area of intense speculation. But the way I would like to offer a view would be to say this, that the human species emerges in Africa maybe 200,000 years ago, and instantly spreads over the entire planet, unlike the other primates.

Brian Swimme: The chimpanzees are 99% identical with us at the DNA level, and they've been in Africa for 70 million years, completely happy. All right, no problems with Africa. So we come along 1% different and we roar all around the planet and we invent language and technology. And so we, at the time in the universe, when the earth as a whole community is learning to think through the human race, we're not just here, we're here as the thinking portion of the earth community. That's the way I would like to sort of throw it out to you.

Barbara Holmes: That's a really helpful view. I'm not so sure we even know how to be human with the things that are occurring. We're just out of a pandemic. I'm sure you noticed that as humans abandoned public spaces, animals came back and for a brief moment, it looked like the earth was sighing with relief as our human dominance abated for a little minute. And you have said, we're not managers of this planet. We're here to build the nervous system of a planet that is consciously participating in its own evolution. Could you just speak to that for a minute because I'm really not sure that we remember how to be human.

Brian Swimme: I think really we're discovering what it means to be human. We have a tendency to identify ourselves with subsets. And so we'll say I'm American, I'm Chinese, I'm French, I'm a Democrat, I'm Republican, I'm Christian, I'm Buddhist. All of these designations are important and they're real, but they're secondary. All of us are cosmological beings. This is a thrilling discovery. We are all like apples on an apple tree. We come out of the same tree. We're just so profoundly one. This is the unity of the human species. To really understand the human, we need to get outside of our cultural reference frames in order to appreciate our cultures. When they ask about what it means to be human, those of us alive today are working with discoveries that simply were not known in the past.

Brian Swimme: The people in the past were absolutely brilliant. Our brain size has not changed at all. If anything, it's shrunk. I'm just trying to say that the same intelligence we have, humans have had now for 200,000 years. The great thing about humanity is that our knowledge accumulates. This is what makes humans unique. All species have languages, but we invented a language, symbolic language, that enables us to accumulate knowledge. So the part that I get so thrilled about is to think that our minds are 300,000 years old, at least. We're adding, we're adding, we're adding and now we happen to be the generation that is discovering this cosmological evolution. So we realized, wow, we've all come out of this creativity. It's an amazing opportunity to discover how profoundly unified we are, even though we're fighting and we have all of these horrible things going on. But over time, this discovery of a new cosmological story is going to make a big difference.

Donny Bryant: You often speak that along with this awareness of this knowledge comes a tremendous, or it carries with it a responsibility with that knowledge. Could you speak a little bit more about the scope and the vastness of this responsibility that we must have, that comes with this knowledge?

Brian Swimme: For three and a half billion years, evolution proceeded primarily as Charles Darwin described it, and that is through natural selection. And then Darwin's insight was

deepened in the 20th century when we discovered genetics. So now we say natural selection and genetic mutations, and that really did characterize evolution as far as we know for three and a half billion years. But we've changed that. We've changed it because now our decisions, our decisions, are determining the evolution of a planet. Now, Charles Darwin was not ignorant of human decisions and he would talk about in terms of breeding, animal breeding. But he wasn't aware, no one was aware at that time of the vast extent a human decision making had. So that's the transition. Now, let me just say this, natural selection enables the planet to remain whole. The ecosystems it develops are profoundly complex. Then we've come along and we have broken out of the process of natural selection.

Brian Swimme: Why? Because no other species can deal with us because we've got a mind, like I say, that's 100,000, 200,000 years old. If we gave the bees all that experience for the last 100,000, years they would be able to deal with us. What we realized then is now this is I think it's a simple idea, but I think it's crucial and it says this, if you're an oyster, you have to deal with survival, sexual reproduction, right? You don't have to worry about the redwoods or the walruses. This is not your concern. But now our decisions are determining what's going to happen to the walruses, the oysters, the redwoods. So when we first started out as humans, 200,000 years ago, we were just like an oyster. It didn't really matter that much what we thought or did, we were four and a half feet tall. The damage we could do was slight, slight, slight.

Brian Swimme: But because of this accumulation of knowledge, we are now determining the evolution of a planet. The way it just stunned me when I've learned this is that there really are no wilderness areas left on our planet, certainly on the land. There are areas that are designated as free for animals, but they're like mega zoos. So that means that our human decisions are determining how the tigers, what they'll look like a million years from now. They're determining whether or not whales will be here. So here's the great, it's a spiritual change. It's the recognition that human mentality is not just for humans. Human mentality has to accept the responsibility that our decisions are determining the evolution of a planet. So we have to learn to think at that level. It requires a new mind and a new heart. That would be at least my way of getting at the responsibility, Donny, we have to find a way to accept.

Barbara Holmes: We're accumulating evolutionary knowledge. I'm not so sure we're accumulating spiritual maturity. There is so much about cosmology that is mystery. And I've noted that most scientists are uncomfortable with mystery, primarily want to deal with equations and facts. And you were one who's willing to host that mystery. You describe a tree as an unseen shaping, that is to encountered with awareness that we are in the presence of numinous mystery. That just changed the way I saw everything. How is it that you have been able to keep the mystery while continuing to do the work of gravitational science?

Brian Swimme: I can actually explain that one. If a person's lucky, they have one great moment when they understand something and maybe some people have 1,000. But

I had one great one, one great one. Well, it's my response exactly to your question, Barbara. Here's what happened. I was on a fishing trip with my dad and we had to ride horses down to the Fraser River. So when he was getting the horses ready, I was just sitting there waiting for him. So I just sat down and I started picking up this rock and dropping it. Now, I was in the last year of my graduate studies. So I was writing my dissertation on gravitational systems. And so I was lifting up this rock and dropping it. At first, everything is sort of commonsensical, you lift up a rock, you let it go, it drops.

Brian Swimme: But if you do it 100 times in a row, there comes a moment when the normal way of looking at it changes. And then I asked myself, why is the rock dropping? Why is the rock dropping? Now, the explanation we would give would be Albert Einstein's general theory of relativity. And before that, Isaac Newton's universal law of gravitation. But I knew all of that mathematics. So the mathematics will determine the exact trajectory of the rock. But I was asking why. Why was it moving on that trajectory? I said, what kind of explanation would make me happy? It would be something like this, that if somebody came up to me and said, "Brian, what has happened is that there are these little tiny creatures and they have very, very tiny arms. You can't see them, but they're reaching out and they're grabbing the rock and they're pulling it. They're pulling it down."

Brian Swimme: Now that's an explanation, right? What I finally realized is that the very fact that the earth and the rock are attracting each other, that fact simply has to be accepted as a fundamental reality. It isn't possible to explain it with mathematics. Now, I don't think I could say that and even believe it, if I hadn't studied gravity for the last six years of my life. I knew the science of gravity. But here now, you'll love this. When I did some digging, I found out that Isaac Newton himself asked that same question. He asked it this way. He said, "Why doesn't an object, when we release it, why doesn't it move sideways?"

Brian Swimme: So to answer your question, there's a way in which we can assume that science explains everything. And in a certain sense, it does because of this fantastic power to predict. But in another sense, it doesn't explain the why. Why is there attraction? Why? And that to me is, that's where we move into mystery or mysticism, or I also like to call it heart knowledge, at level of heart. So I honestly think that the scientists who, the really great scientists like Isaac Newton and Einstein himself, they maintain a sense of mystery throughout their work. It's not as predominant in the way in which we use science to do things with engineering, all of which is great. But that would be my experience of mystery in the midst of my science.

Barbara Holmes: I remember back in the early 2000s, when we were doing conferences in San Francisco at the Sophia Wisdom Center. And what I remember is having studied gravity in the most basic kind of ways, not like you have, of course, that you told a story about gravity as a holding mechanism, as an attraction, that it was something that holds us to the earth, something that was an allure, an attraction that made me understand in a completely heart way, the science of

gravity.

Brian Swimme: Yeah. And that's our challenge. We've got all this brilliant knowledge, but our compassion is limited. So to expand that out at the heart level.

Barbara Holmes: You're a fan of Teilhard de Chardin philosophy. How does his philosophy help us to understand the journey of the universe with regard to the accumulation of this evolutionary knowledge?

Brian Swimme: Because I work out of his thinking so much. I think much of what I have said already really has this foundation in his work. He was really the first person to actually identify this power of the human. And the way he put it is really great. He said the earth starts off as a molten lava, sometimes called the geosphere. And then it gives rise to all the volcanoes and so forth, give rise to the air, so the atmosphere. And then as well, when things cool down a little bit, to the hydrosphere, the oceans. And then something like 400 million years later, the interaction among the rocks and the air and the water give rise to life, the biosphere. And then three and a half billion years later, the earth gives rise to the noosphere.

Brian Swimme: That's what he called it, the noosphere. It's the thinking layer of the planet. I'm captivated by that vision. Just to simplify, you have the geosphere and around that, the biosphere, and then around that, the noosphere. And what's so great about Teilhard is that he saw the whole story of time in its sacred dimension. And he was completely caught up in the details of paleontology, but at the same time, he felt himself, he felt the wave of evolution just carrying us forward. He saw his way of summarizing his vision, was he saw a great moment of unity ahead for the human species. He was the stretcher-bearer in World War I. There's all kinds of slaughter taking place all around him. But in the midst of that, he had this vision of unity, not necessarily the end of time, but just a very different planet.

Brian Swimme: Just imagine early on the earth is all molten rock and the atmosphere is all brown. Then later on with oxygen, the atmosphere turns blue so that things really change at a fundamental level. So that as the noosphere deepens, and as you say, as we become more mature, it's like the earth itself will be quite different from what it is now. The whole earth will be a different era. So that's the excitement I get from Teilhard.

Barbara Holmes: That's so hopeful with troops moving to Ukraine like it's 1940 or something, you wonder whether or not we're really making progress. And to have a belief that the universe has within it an intrinsic movement toward unity, toward community is very, very hopeful during these times.

Brian Swimme: Yeah. I agree. Yeah.

Barbara Holmes: Brian, what do you mean by planetary mind? You may already have alluded to it, but what do you mean by planetary mind?

Brian Swimme: One approach is that of looking at the earth community itself as a living organism. I'll go further with that, but just say this, that the concept of the noosphere has been thought about from a variety of perspectives. I would even say the majority

of the scientists who look at the noosphere have a more conservative view than I am presenting. The conservative view is that the noosphere consists of a network of computers tied together by our global communication system. That's the conservative view. But there's a more radical hypothesis on the table. And that is, we are giving rise to a global organism. Because we don't know, with clarity, what's happening, we don't have the language. So when I say organism, I don't mean like a big animal. I mean something that's intelligent, but it's a qualitative leap from where we are.

Brian Swimme: It's the science of self-organization. If you take some ants and you have like seven or eight of them, their action is chaotic. It just goes this way, that way. There's no unity. But if you bring together 1,000 of them, then suddenly, an order emerges. It just shows up. There's no one ant that knows what's going on with the whole. It's baffling, because we don't think that way. Now, the same thing is true at the level of chemistry. There are famous chemical reactions. You're putting together chemicals, chemicals, chemicals, and then all of a sudden, the system starts to act as a whole. For instance, after a certain period of time, there will be a spiral movement on the surface, then it will stop. Then you wait. In a certain amount of time, the spiral movement starts again.

Brian Swimme: So you have to ask yourself, who gives the signal? There's no one molecule that understands. It's rather that the whole that emerges is more intelligent than any of the parts. So we're just beginning to get a feeling for the physiology of this new organism. And this is the work of James Lovelock and Lynn Margulis, that looking at the planet, they notice that, they were the first ones really to make this insight that planet earth has maintained the same temperature, a narrow band of temperature, for four billion years. Now, life can't exist outside of that narrow band. So then we can say this, for a long time, we'd say this, "Well, we just lucked out. Earth was just the right distance away from the sun. Happened to have the right temperature." And that's a believable hypothesis. Until we discovered in the mid 20th century that the sun has increased in temperature more than a million degrees from the beginning. So the sun is getting hotter and hotter and hotter.

Barbara Holmes: Wow.

Brian Swimme: Yeah. And earth has maintained the temperature.

Barbara Holmes: How did that happen?

Brian Swimme: Exactly. Exactly. What happened in some of the details is that the earth started to bury some of its carbon dioxide from the atmosphere. It would draw it down. The sea creatures would use it to build their bodies. The shells would drop to the bottom of the ocean. And so more and more carbon was being drawn out of the atmosphere. Carbon dioxide reflects the heat back. So by taking carbon dioxide out of the atmosphere, the earth is cooling down. Let's think about that for a century. Let's try to get into that. That would be an example of the physiological intelligence of the earth. But then what about the new levels that are coming in? See, we're in the midst of discovery what the planetary mind is capable of.

Donny Bryant: To continue this thought, you have a statement in your book, The Universe Is a Green Dragon. And in this statement, you state each person discovers a field of allurements, the totality of which bears the unique stamp of that person's personality. Destiny unfolds in the pursuit of individual fascinations and interests. And then you go on to say, by pursuing your allurements, you help bind the universe together. The unity of the world rests on the pursuit of passion. As we talk about this wholeness, this cosmic unity, there seems to be a, you're giving us insight to how our personality, how our passions also participate in the contribution of this cosmic wholeness. Can you speak a little bit more about that, if you can?

Brian Swimme: Science can tell you how a rock moves when it falls to earth. So we do the high really, really, really well. But the why is where, to get the why, we have to go to poetry and religion and philosophy, mystical insight. And so what I am doing there and drawing upon all kinds of people, but especially Teilhard de Chardin, what I'm doing there Donny is to say that on a real deep level, I don't choose what I'm fascinated by. We discover it. Say you have a parent who just wants you to be a doctor, "Be a doctor, be a doctor, study chemistry," and all that. And you try, you try, you try and then you realize this is just not me. And then you become a computer wizard or whatever, poet.

Brian Swimme: That just fascinates me, the fact that our fascinations they're unexplainable. We discover them, we don't construct them. So to me, then the why, let's go back to gravity. Why do things draw together? Because the universe wants to create community. So the atoms are drawn together to create the community of a star. The stars are drawn together to create the community of a galaxy. So in other words, I'm happy to provide the why for why we are fascinated. We are fascinated because the planetary mind needs our creative development in order to unfold. The planetary mind, like I say, it's hard to think about it because when you think of mind or organism, we think of something out there. But what we have to realize is that we are the planetary mind. And the deeper we develop, the more we express the planetary mind with full integrity. And that can only happen if we pursue our unique mission, our unique fascination, our unique passion.

Donny Bryant: Wow. Wow.

Brian Swimme: It's so exciting. Do you see what I mean? It's so exciting. It's so much more exciting than-

Donny Bryant: Yes. Yes.

Barbara Holmes: I know. You have said, when we look at the stars, we're looking at that which is looking, and we are the individual persons in the planetary nervous system that the planetary system is awakening to itself. So we are the system becoming conscious of itself.

Donny Bryant: Wow.

Brian Swimme: My book hasn't even come out yet where I have that line in there.

Donny Bryant: Wow.

Brian Swimme: Swear to God. When did I say that to you? When we look at the stars, we're looking at that which is looking at. Yeah. We're looking at that which gave birth to us. That phrase just captures it all. It just captures it all. I try to build up to it. I've never done this with a group, but this is what I hope teachers will do with their kids, that you start off. You go, okay, look at the stars. And now I'll tell you a story. The stars constructed the atoms of your body. And we go into the details, every carbon atom of every phosphorus atom, every one of them, constructed in a star that blew up and now you're here. So there's that.

Brian Swimme: But then to take them to the next level, it's not just the body that they've created, it's our mind as well. We're not just a body, we're a mind that's looking at the stars. So we're looking at that, which gave birth to us. We're looking at that, which enabled us to look. Thomas Barry would call our discovery of this whole story, the primary revelation. He said there's there's scripture, that's great. There's meditation and so forth, that's great. But the cosmos itself is the primary revelation and when you start to get a feel for it, you do, you realize that we're changing in a very deep way with this knowledge.

Donny Bryant: So the primary revelation of the concept of the cosmic we, or the cosmic community, the unity, the oneness, the connectivity of the whole, the all.

Brian Swimme: Yeah.

Donny Bryant: Yeah.

Brian Swimme: Yeah.

Donny Bryant: Wow.

Brian Swimme: And the creativity that's bringing that forth.

Donny Bryant: Wow.

Barbara Holmes: So the university is attempting to transform itself and it's doing that, you say through relationships. There's no formula. It's not through a predetermined plan, but through the relationships, the interrelationships.

Brian Swimme: Yeah.

Barbara Holmes: That's how we're moving it because we don't know how to get toward transformation. I've always thought of it as a quantum leap from where we are to where we have to get to. Don't know how we're going to survive that leap.

Brian Swimme: Yeah. Yeah.

Barbara Holmes: But it seems simple enough, if it's about relationship.

Brian Swimme: I couldn't agree more Barbara. That's the fundamental reality, the relationship. And just like Donny was saying the we, the we as the fundamental.

Barbara Holmes: Yeah. I think more of our politicians could use some cosmology lessons.

Brian Swimme: Well, absolutely.

Barbara Holmes: You talk about the leadership of starlings. I love that story you tell about the fact that when there are thousands of starlings and birds flying across the sky, that the leadership moves among the birds, that you don't have one leader flying itself to exhaustion. That the leadership shifts in one bird leads and another, and that there's this collective intelligence that allows them to get where they're going and to avoid predators. And it's the power of the collective that humanity needs to recover.

Brian Swimme: Yeah. Yeah, exactly. The cosmology of the past made it almost impossible to discover the intelligence of the collective. I'll give you an example so that the for the last 5,000 years, the fundamental cosmology has been that of a pyramid, right? And so you have all these low level things going up to the high level thing, and the high level thing is sort of the human, the conscious human. When brain scientists started to examine the brain, they were looking for the top of the pyramid. They were looking for that neuron, somewhere there's a neuron that's given out all the commands. It's because we're so top down, top down. And then also it goes back all the way to our cosmology of seeing the earth as a center, everything's going around us.

Brian Swimme: But instead of that, what we have now is an omni-centric universe. That is another one of those amazing discoveries that, this follows from Einstein, is that every point in the universe is at the center of the expansion. It can be confusing to think about, but it's widely accepted among mathematical cosmologists. The image I give is of a rising loaf of raisins or raisin bread. If you're on any one raisin, you think you're not moving and you look around and all the other raisins are moving away from you. That's what we've discovered, all the galaxies are moving away from us, all of them. And the same thing would be true in any galaxy.

Brian Swimme: So that an idea for people to think about is what does it mean to be omni-centric? In an omni-centric world, for instance, every species on earth has an essential role to play. They're central for that particular role. Phytoplankton are central for the creation of oxygen. There's a million different centralities. And it's also a way I think we will view the human cultures in the future. Every culture on our planet is central in some interesting, unique way, and it makes the whole thing then become so much more interesting than this pyramid thing with one view. We're moving, I think, towards a time when leadership will be rippling through the population.

Barbara Holmes: Yeah. There's another form of organization in this post pandemic world we're trying to get back to what we thought was normal. I'm not sure that anything is ever, quote, normal. We're moving toward transformation, and how that occurs is just fascinating when you do it from a cosmological perspective.

Brian Swimme: Yeah. I like that. Nothing's normal.

Barbara Holmes: Do you have any new books that you want to tell us about or any new things that you're doing that like to share with the audience?

Brian Swimme: Sure, two things. Before I die, I wanted to make one last effort of telling the new cosmology in a way that would get to the next generation. And so we've made several dozen five minute videos on social media, on YouTube and the whole series is called The Story of the Noosphere. The Story of the Noosphere. So a lot of what that I'm talking about here, we go into, with images and music.

Barbara Holmes: Wonderful. I'm looking forward to looking that up, as is our audience I'm sure.

Brian Swimme: And the other thing, last thing, would be the book I've just finished, it will come out in November, it's called Cosmogenesis. Cosmogenesis. And I tell the story of the rock, that's why I had it in my mind.

Barbara Holmes: Okay. I was looking forward to that too. This has been a wonderful and stimulating hour. Thank you, Brian, for your time and your wisdom.

Donny Bryant: It's been a privilege.

Brian Swimme: So much fun to be together. Thanks for having me.

Barbara Holmes: Thanks for listening. We'd like to leave you with a reflection from this episode. One of the things I just love about talking with cosmologists is that they are weaving mystery, they're unveiling mystery. And isn't that what we live in the midst of? See, according to Brian, the universe transforms itself through relationships, not some predetermined scientific mumbo jumbo. What he's saying, I think, is that the universe is moving toward unity. The universe is moving toward community. The universe is moving toward interdependence. So if relationship is a basis for life, then our survival depends on our reliance upon one another.