

SCIENCE OF THE NOOSPHERE

Brian Thomas Swimme

with

David Sloan Wilson

David Sloan Wilson: Brian, you were a very important part of the Human Energy Project and were in it at the ground floor, as I understand. But I want to ask as I have all the others, your experience with Teilhard. Your experience with him, when you encountered him, what he meant to you leading up to this project. And I understand that you have the honor of writing the introduction to the new translation of The Phenomenon of Man or The Human Phenomenon as it's the new title. And so that's quite an honor. So what's your history with our friend Teilhard?

Brian Thomas Swimme: Yes. I would love to answer that, David, but let's start off with a toast. To our host Ben Kacyra. It's just so, so great to be here and our cinematographers. I want to introduce my relationship with Teilhard, but the way I want to do it is to talk about how my approach is similar to Teilhard's.

DSW: Okay.

BTS: Okay? And how it differs from, I would say, a lot of mainstream science. Okay. But I'm going to start with a story from the Middle Ages. You might've heard this story, but I'll show the relevance. Three men are walking, doing something similar and they asked the first man, "What are you doing?" And he says, "I'm carrying a stone." And then they ask the second man, "What are you doing?" And he said, "I'm providing for my family." And then they ask the third man, "What are you doing?" He said, "I'm building a cathedral."

I think it relates to the contemporary scene as I see it, right? Our endeavor at Human Energy and definitely drawing upon Teilhard de Chardin is to answer some of the fundamental questions. The big, deep, philosophical, existential questions. Why are we here? What are we doing? And in contemporary society, most people would answer, if they're carrying a stone, they would say, "Well, I'm a lawyer." Right? Or "I'm an accountant" or "I'm whatever." That would be the first answer. Then in the second group, when you ask them, "What are you doing" They would give the answer from a larger perspective, that of biology.

They would say something about that I'm part of the evolution of life. But the third person would answer in terms of universe as a whole. I picked up on your mentioning, you said, "I wonder sometimes if I'm parochial." By focus on life and Teilhard focused on the whole. All of the whole universe. And that's what really attracted me to his thinking.

So that the third person would say, "I'm building the Noosphere that began to be shaped 14 billion years ago. In that moment, I've just leapt out of the conversation of focusing just on industrial society or just on the evolution of life. I want to say something about how the activities that we're involved with go back to the beginning of time and why is that?"

And again, I'm inspired by Teilhard. There's a way in which we can understand what we're doing as something that's profoundly cosmological and biological and social at the same time. So I really feel like what the Human Energy Project is trying to do is to provide an orientation to these ultimate questions. They're of relevance to the universe as a whole. Now going right into where you and I might differ. It would be this. Well, the way Terry Deacon puts it is that his focus is how do things happen. He wants to understand how they work.

So that's the question he's driven by, and it's brilliant. And what science has learned is brilliant, but I'm interested in the question of why. As well as how. I want the why to relate to, like I say, the whole of things. So then I would say that in my orientation, following Teilhard, right? I began with an assumption and then flowing from that, is my life work, my thinking, my suggestions.

So my assumption is this, the universe is, the exact terminology, the universe is a self-assembling creativity aiming at community. So this is something I start with. So then, is that type of statement, is that supported by science? So what I want to do is talk to you about the way in which I'm happy using the word "aiming at," even though it has the connotation of conscious intention, which I don't mean. Right? But I'm saying something about how there's a way of thinking of intention, but before we get to consciousness, before we get to language, even before we get to brains...

DSW: Or before we get to life.

BTS: Even before we get to life. Yes.

DSW: Because for me, life is this watershed. And when we say that something like that extends even before life, that we're basically challenging that watershed concept. The watershed concept would say what we're talking about here is intrinsically about living systems. It's not about non-living systems. And what you're saying is "Yes, it's about non-living systems too." So I think that is what I'm most interested to explore. But Brian, I also want to know just a little bit more biography. You spend as short a time as you want on it, but I want to know, again, just when you first encountered Teilhard and a little bit more about just your background also. Actually I could know it better, but just in terms of your story and how it intersected with Teilhard.

BTS: My story is actually very similar to Ben's in that I was raised Catholic and I was educated by the Jesuits. So Teilhard was introduced to me when I was in high school.

DSW: Were you questioning your faith the way that Ben was?

BTS: There's a difference there. We'd have to examine it more carefully, but for me it was, I was introduced...like I said, I was 14 years old, so I'm not sure I was smart enough yet to have...

DSW: Yeah. You might not have been questioning...existential questions.

BTS: And this was coming from the Jesuits who were teaching me. So I felt like, "Oh, this is part of the deal." Right?

DSW: Okay.

BTS: You know what I mean? So I was thrilled by it, but it wasn't with a sense of overcoming angst.

DSW: I can't resist asking. I mean, Teilhard was an outlier. So with the fact that he had somehow become part of the curriculum that you were being given is interesting in its own right. I mean, why is it that your teachers just introduce you to... You didn't have to ask because Ben had to ask, but you... This is just basically that your teachers thought well enough of Teilhard to have just given it to their students.

BTS: Exactly. I never had a sense that I was learning something that was...

DSW: Heretical.

BTS: Heretical. No, I didn't. And it may just be, there's a slight difference in age between Ben and maybe in those intervening years, there was enough of an acceptance among certain Jesuits just to take Teilhard and introduce him. So to me, it was just like a thrill. It was fantastic. Like, "Wow." That's the kind of approach I had. The kind of shock I had was not Teilhard. It was encountering people that had a different point of view. So I took the science and the Teilhardian vision as sort of coming together. And when I met people that were entirely reductionist or materialistic or whatever, that was news to me, that didn't happen until I was in graduate school. So that's basically my story of where I encountered Teilhard.

DSW: The point I make in my working paper is that when you look at the struggle that people have with evolution education, teaching evolution at any level, but let's just say the K-12 level, I mean, it's such a hard problem. Half the people are creationists. Even when you teach it, it's just sciency and so on, and they're not very impressive at all.

And then you have Teilhard. If you learn evolution through him and it's so spiritual and inspirational and has meaning and all of these things. So I mean, there is a night and day difference between evolution as related by Teilhard and evolution related in any other way. Therefore if Teilhard can be updated from an evolutionary perspective, so basically that this view can, in fact, rest upon a strong contemporary scientific foundation, that's a pretty big deal. It means that we want to educate people about evolution. We can do it that way. And there's no one around to say that this is not scientific because we've shown that it is. And yet it also has such meaning. So I think that's almost the pedagogical import of this study. So in any case continue.

BTS: And the thrill of being part of this moment. I mean, it's a massive change. I think a lot about our moment right now, the way I reflect on it, is in terms of Copernicus. So Copernicus is this guy who has this theory, and then you just sort of imagined him showing up. He's on the west coast of Europe in France, and he's telling people, "Well, the earth is actually flying through space." And then everyone was saying, these would be the equivalent of the creationists, right? But not just creationists, also like super reductionist scientists, same thing. So they would say, "But we see the sun come up and we see it go down, what are you talking about? I mean, this is ridiculous."

"I mean we don't see any movement." And then he said, "Well, no, no, no. See, the earth is spinning. The earth is spinning. And so that's why it looks like the sun's coming up." And they say, "If it's spinning, then why isn't the Atlantic Ocean washing over us as it spins?" It was so profoundly counterintuitive. And we are in the exact same situation. Here's an example. So we have learned that the universe is expanding. Nobody expected this. Nobody expected this. Einstein didn't believe it. And even Hubble, when he got the first data, he didn't believe it. He found a way to excuse it away, but finally Einstein realized it's expanding.

That means that the way in which we have thought forever. From Newton is forever. That's all false. And then they examined it more carefully and the person who made this calculation is Stephen Hawking. And here's what he found out. The expansion is so exact that if you alter it slightly, the entire complexity of the universe collapses either into dust or a black hole. No scientists will disagree with this, that the expansion from the beginning is that exact. So now we have to take this in, that the universe from the beginning was aiming at bringing forth life. Now that is so different.

DSW: So what name does this have? I want to say the anthropic principle, but I'm not sure that's what it means. It's basically that the universe is so fine-tuned that requires an explanation. If it was just a tiny bit different, then life as we know it could not have existed. And so therefore, the fact that it's fine-tuned, there's meaning to that. It's not just chance basically, that there's some sort of agency that's required for that or something that's required for that. But you just can't say that something that fine-tuned happened by chance. There has to be some better explanation than that. Am I paraphrasing that?

BTS: You're getting part of it. The fact of the expansion being that elegant is not in doubt. Any scientist who has examined it understands that's the case, right? The explanation is where the problem comes in. Right? And there are three basic scientific theories as to how this happened. All right. One is just what you said, fine-tuned. But as soon as you say fine-tuned, you need a tuner. So then that's the idea that God tuned the universe just right to expand this way. Right?

That's one, a number of cosmologists hold to that. But the more popular theory among cosmologists is that our universe is one of an infinite number. They're all expanding at different rates. We happen to be in the one that has life. That would be in other words, now you're bringing in the whole idea of chance,

and here's the third. And this is the one I like myself. The third is, it's in the very nature of the universe to bring forth community. It's in the nature of the universe. So, like I said before, this is my beginning point. Right? And I don't like the idea of a God that's tuning the universe. That just seems so old-fashioned, it doesn't appeal to me. Likewise, the idea of an infinite number of universes about which we have no empirical data.

DSW: Well, it's not falsifiable.

BTS: It's not falsifiable, so it's not science. So to me, this, again, this would be Teilhard's point of view. This is the nature... I mean, most people don't know this about Teilhard. They'll say, "Ah, yeah, he's a Catholic and a paleontologist." But when he was forced to say what he believed in. So they said, "What really is your faith?" He wrote an essay, "How I believe." He says in there, "If I'm pressed to say what I believe in, even beyond God, even beyond Christ, if I'm pressed to say what I ultimately believe in, it's matter." That is the foundation of Teilhard's faith and trust. And I love that.

It means that we're in this realm, right? That generates form and complexity and beauty. And so then, in that way of thinking, the universe from the beginning was aiming at living communities. So let me put it this way, make it more empirical. If you examine the dynamics from the point of view of physics, when the universe is one minute old, if you examine the dynamics, it's absolutely certain that the universe would create stars, galaxies, and rocky planets. So now we know there are a hundred billion rocky planets in the Milky Way. Well, Teilhard just pushes it further and says that, "Yeah, rocky planets are inevitable. An atmosphere, a hydrosphere, a biosphere, a Noosphere." So that there is a there's this epigenetic unfolding...

DSW: Just by virtue of the large numbers?

BTS: Just by virtue of the large numbers. Exactly. So chance is still involved, but it's going to happen somewhere. So we find ourselves in the middle of it, but it's something that was, like I say, aimed at. I was trying to think about what would be an analogy to get at this. I came up with one. Oh yeah. I hope you like this. The worms 700 million years ago were acting in a way to bring forth the first brains. They didn't know it.

So in other words, they were participating in the way in which the universe brings forth beauty and structure without anything like conscious intent. And we've been doing the same thing. We humans, right? The guy invents the telegraph. He's not thinking, "I'm building the Noosphere, but he is." So that's what thrills me. The discovery of the expansion of the universe as a scientific fact took place in 1964. So that was the moment we woke up to seeing ourselves inside this amazing creative event. Right? But our moment now, I mean, it's becoming increasingly obvious that we are becoming aware that we're constructing the Noosphere. Aristotle didn't know it. Plato didn't know it. Jesus didn't know it. Confucius didn't know it. It took Teilhard, suddenly it dawned on him. "That's what we're involved in." So that's what I get so thrilled about, we're part of that.

Well, let me just say one more thing. Because I want you to feel the way in which there's a connection between the so-called pre-living world and the living world. And so Descartes, for instance, Descartes thought that humans were free and had consciousness and everything else was mechanical. Animals were machines. Okay. But now we've grown and developed and so forth, now biologists are willing to say, well..."

DSW: Absolutely not, right.

BTS: You know what I mean? So that biologists have pushed it back, pushed it back. And some biologists say, "Well, yeah, the first cell, that's when we have the emergence of what's exciting and intentionality and so forth." I want to go the next step. You see my point? I'm want to push it further. But here's the

way I want to connect. The two fundamental dynamics in the universe are expansion and contraction in the universe as a whole.

Because those two were balanced, the galaxies come forth. That's that whole bit about what people call fine-tuning. I don't like that phrase. You can see why. But it's that balance. The same thing is true with living organisms, as you were discussing with Terry in your interview, that you have this dispersal, the second law. There's a movement to disperse that has to be contained somehow. So life manages to hold it together. So the dispersal is the expansion, the holding it together is the contraction. That's what built the galaxies. It's that same dynamic in the meso-form that creates life.

You see what I'm saying? So then if the expansion or the contraction of the universe, if either one of those is altered, all right, you have a collapse. Well, I think the same with truth with life too. If there's too much dispersal, you don't really have life. If it contracts into too rigid, you have a species that doesn't have evolvability. That's all I'm trying to say. And then you go into the human realm, right? So then it's the movement to community, which means cooperation, and all of your work. So I'm just trying to see these three domains: the cosmic, the biological, the human as in a resonance with each other.

DSW: So that's all eye-opening for me. I think that because non-life did give rise to life, that's not a rigid barrier. So the more we understand that, the more we could actually talk about non-living processes having some of the elements that we know exist for living properties. Another point to be made, I think, is part of the effect of telling this grand cosmological story and just noticing the awesome aspects of the universe, whether it's since the Big Bang or quantum physics or the nature of matter or these things, is that it's so different. And it does make you feel very small by comparison. And part of something which is mindbogglingly interconnected.

I think all of those things have a spiritual quality because part of the essence of spirituality is to think of yourself as part of something larger than yourself. And what I just recounted does that big time. So you can't help but think, "Where do I fit in with this? How can I serve it?" And so on. So I think that there's a very powerful spiritual aspect to this content.

BTS: Yeah.

DSW: But I want to ask kind of a very pragmatic question, which is that as we kind of set to work building the Noosphere, going from where we are now, which is impressively large scale cooperation, but we need to expand it still further. What are the actual tools in our toolkit for accomplishing that? Getting people to cooperate at a larger scale, creating distributed systems that actually work well at the systemic scale, getting people to adopt a whole earth social identity as Josh Ober was saying. Because that's almost the first thing, that unless you actually regard yourself as a citizen of the earth, it's hard to imagine working on its behalf and towards its appearance or construction. So there's a set of tools that are needed, both conceptual tools, first and foremost conceptual tools, but also physical tools, instruments, and computational tools. So this is like a massive engineering project, design project. What tools would you contribute to that based on your background?

BTS: Yeah, that's the question. As a first step, what you said two days ago, you said, "Really, it's all a question of identity." And I think that's absolutely the case. What Josh talked about in terms of our challenge is we have to find a way not to identify with a subgroup. So that is a major challenge. Human Energy is, I'm part of it, but Human Energy is focused on distributed knowledge. Using the technological tools that have suddenly shown up, we're making these... Right now what we're doing is very soon going to be available to anyone on the planet. I mean, just to think that out loud. I mean, Socrates wanted to change the world too, and he could shout. He didn't care about written documents. So you had to be within 30 feet of him to be influenced. Right?

DSW: Right.

BTS: We now have the entire planet as our audience.

DSW: Which one of those three thought that writing was a really unfortunate development.

BTS: Exactly. Because it ruins memory.

DSW: Writing, my God, the worst thing, what's the world coming to?

BTS: Like our worries about certain things today. But I mean, I just feel like that that's the first step really, is that we're attempting to... I was thrilled listening to Josh. Distributive knowledge. We're distributing knowledge that took a hundred thousand years to arrive at it. And now somebody in Bangladesh in a coffee shop is going to get the whole story right there like that. So that the realization is that we're fundamentally cosmological beings and secondarily we're lawyers or Americans or all the rest of it. So that I think is one of our major, major contributions. And hopes.

DSW: Yeah. Well, that's great. That's great, Brian. I think that we've done our work here. I think that as we tell that grand story that we do need to extend it all the way to the universe scale. To say that it all begins with the origin of life is not complete. You don't get anything, you don't gain anything from that. So good. Let it be.

BTS: Let it be.