

## Mind & Life Podcast Transcript David Sloan Wilson – Conscious Evolution

Original Air Date: July 9, 2021
Retrieved from: https://podcast.mindandlife.org/david-sloan-wilson/

Opening Quote – David Sloan Wilson (00:00:03): We could actually explain just about everything that's distinctive about our species, mentally in addition to physically, as a product of cooperation. First, we became highly cooperative, and then just about everything else that we associate with our species—including our capacity for symbolic thought and our ability to transmit large amounts of learned knowledge across generations, in other words, cultural evolution—all of these could not happen without a high degree of cooperation, much of it unconscious. We cooperate in ways that we don't even think of as cooperation, that takes place beneath our conscious awareness.

Intro – Wendy Hasenkamp (00:00:45): Welcome to Mind & Life. I'm Wendy Hasenkamp, and we are just dropping into your feeds with a bonus episode. I'm really happy to share with you this conversation with evolutionary biologist David Sloan Wilson. David is Distinguished Professor Emeritus of Biology and Anthropology at Binghamton University. He's also a co-founder of both the Evolution Institute and Prosocial World, and the author of numerous books, including his recent book, This View of Life: Completing the Darwinian Revolution.

(00:01:20) The reason why we're sharing this episode now is that we at Mind & Life have actually just launched a new film called Evolution of the Heart. This is a short documentary covering conversations between the Dalai Lama, David Sloan Wilson, and social scientist Pumla Gobodo-Madikizela from a 2019 Mind & Life event in Dharamshala, India. The theme of that gathering was Compassion, Interconnection, and Transformation—topics that we often touch on here in the podcast. I definitely encourage you to check out the film. It's really wonderful, and not only because of David's work, but, of course, the Dalai Lama's contributions, as well as Pumla's amazing work on truth and reconciliation. You can watch the film for free on our website at mindandlife.org and there's also a link in the show notes for this episode.

(<u>00:02:10</u>) I had the opportunity to interview David Sloan Wilson in 2019 before the event in Dharamshala, and in our conversation, he expands on a lot of the ideas that he shared there with the Dalai Lama. David's work in evolutionary biology extends beyond genetics to include personal and cultural evolution. In our conversation, we discuss key evolutionary ideas like competition and cooperation, with a focus on the essential role of prosocial behavior in human evolution.

(00:02:42) David then scales these ideas into what he calls "multilevel selection," and he talks about the possibility of conscious evolution. Along the way, we discuss what it means to be part of a social group, how we can expand the notion of self, and becoming bilingual in both scientific and spiritual perspectives. David shares his thoughts on how evolutionary theory relates to religious and spiritual traditions, and the need to create an ethics for the whole world—a view that the Dalai Lama has also

championed in recent years. David has also worked with Nobel laureate Elinor Ostrom, and he shares how he uses her core design principles to give us a structure, or even a roadmap, for creating more egalitarian and compassionate communities.

(00:03:32) I love how David can simultaneously hold the rigor of being scientist alongside the possibilities of more spiritual experience for creating social change. I find David's work fascinating, and a really important lens to consider in the midst of today's challenges. And I hope it expands your idea of what it means to be a human living on this planet. And with that, it's my great pleasure to share with you David Sloan Wilson.

Wendy Hasenkamp (00:04:02): David Sloan Wilson, welcome and thank you so much for joining us.

**David Sloan Wilson** (00:04:06): Thank you, Wendy.

**Wendy Hasenkamp** (00:04:08): So, you have a new book called This View of Life: Completing the Darwinian Revolution, and your opening line, which I really loved is, "Whatever you think you currently know about evolution, please move it to one side to make room for what I'm about to share in the pages of this book." So, what is the traditional view of evolution, and what are you bringing that requires us to set it aside?

**David Sloan Wilson** (00:04:30): Well, the traditional view of evolution, in the first place, is confined to genetic evolution. So, around the world, for experts and lay people alike, if you say the word evolution, they hear the word genes. So, one way that this goes beyond it is by going beyond genetic evolution. Evolution, in its most general form, is any process that includes the ingredients of variation, selection, and replication. And so that includes cultural evolution, and also our personal evolution, because each and every one of us is an open-ended process that is capable of evolving.

(00:05:09) Another way I think that This View of Life differs from what many people think about evolution concerns reductionism. So, evolution is about genes. It's also about selfishness, individual selfishness, gene selfishness, as opposed to societies as cooperative units. Of course, we think an organism must be an individual. But the idea that a society might be an organism, does that have a scientific basis? Gaia—could the whole world be an organism?

(00:05:42) Most people think that evolution has no purpose; things merely vary and are only selected by the environment. But might evolution have a purpose? Could there be such a thing as conscious evolution? And so here again, let me list them: beyond genetic evolution, not reductionistic, and conscious.

**Wendy Hasenkamp** (00:06:02): So, I think some listeners may have concerns when you speak about applying evolution to societal or cultural domains. For some people, I think, the idea of social Darwinism can emerge, and you bring this up in your book and lay it out very clearly about how this is different from that. Can you explain social Darwinism and how this is different?

**David Sloan Wilson** (00:06:24): Sure. Social Darwinism is the idea that evolution is a competitive process, and that's a good thing; that the way society should be run is for the strong or the fit to replace the unfit. So, that leads to social practices that often justify inequality. So, we shouldn't have a social

safety net, we should just let evolution take its course. The same might be true at the racial level. So, it has been said that Darwin's theory has been used to justify these practices that justify inequality.

(00:06:59) But do you know, that is actually a very severe misrendering of the actual impact of Darwin's theory on these topics. And so the real history is more interesting and more varied. So, let me just tell you about the real history. This is all backed up by very good scholarship, by the way. There is a single chapter in my book that's devoted to it, but there's a lot of scholarship behind it.

(00:07:26) Do you know that the first people that really glommed on to Darwin's theory of evolution... And not only that, some of the theories of evolution that preceded it, because Darwin was not the first evolutionist. There were other evolutionaries in Darwin's day. And what evolution meant then was that the social order is not fixed. Authoritarian regimes, king and pope, the social order was not fixed. Things could change. And so it was actually the socialists of the day who were most excited by the possibilities of Darwin's theory because, for them, it justified the idea of social change. The future need not be like the past. So, we call that socialist Darwinism. And social Darwinism, actually, was a reaction to socialist Darwinism.

(00:08:20) Then we have the philosophical tradition of pragmatism, which originated in the United States, and is represented by beloved figures such as William James and John Dewey, who was a beloved social reformer. They were inspired by evolution and, actually, in a way that got evolution right. Because once again, if Darwin is correct, our entire human conception of reality is going to be based more on the survival values of that conception than any direct apprehension of the external world.

Wendy Hasenkamp (00:08:52): Oh, say more about that.

David Sloan Wilson (00:08:53): Well, of course, there is a world out there, that's independent of what we choose to believe. It's very important to say that. An oncoming bus exists regardless of whether you choose to believe it or not. If you don't step out of the way, you will be dead. So, yes, there is a world out there independent of what we believe. But as products of evolution, what we believe and what we evolve to believe is much more concerned with the survival values of those beliefs, not their direct apprehension of reality. That's why we find it so difficult to see the world as it really is. It's why we defend fictions. When we talk about "fake news," belief in supernatural agents, belief in our own past, our personal belief in the way we are as individuals, all of these you might say are distorted in ways that enhance our survival. And so the pragmatists took this odd very seriously, and it led them to a very experimental approach to the way we think in relationship to how we act.

(00:10:02) So, here was a very positive application of Darwin's theory. No one calls it social Darwinism. And then people say that Hitler was influenced by Darwin? Not at all. I mean, there's plenty of scholarship to show that Hitler was influenced by other ideologies. So, for some reason, we have this kind of bogeyman story that there's something especially dangerous about Darwin's theory of evolution—if we believe it, it will lead us to do these terrible things. That is not true, historically. And of course, it need not be true moving forward.

(00:10:39) What we are trying to do, like the pragmatists like John Dewey, is we are trying to evolve our future. We are trying to manage the cultural evolutionary process to achieve our normative goals, ultimately, at the planetary scale. I dedicate the book to all who are reaching for an ethics for the whole Earth. And that is very similar to Dalai Lama's title, Beyond Religion: Towards an Ethics for the Whole World.

Wendy Hasenkamp (00:11:09): This is maybe a bit of a sidebar, but something you said just maybe think of more connections with our community. Are you familiar with the work of Lisa Feldman Barrett or Anil Seth? [They're] cognitive scientists and a group of people who are looking at processes in the mind and brain through the lens of prediction and also construction. So, a lot about how our perception is, in fact, mostly constructed and not necessarily accurately representing the world, but constructed in a way that is useful for us, as well as even to the level of... our emotions are also constructed in this way, of representing our internal bodily states. So, I think there's a lot of interesting intersections.

**David Sloan Wilson** (00:11:50): Yeah so this is much in the same line. All oriented towards the survival of relatively small units, perhaps the individual, perhaps the family, perhaps a social group, perhaps even a nation. But all of those are lower level units compared to the true common good—all people and all of nature.

(00:12:12) So, it's in that sense that the Buddhist doctrine of suffering—basically, that suffering exists—yes, that's exactly what we expect from an evolutionary perspective. Evolution doesn't make everything nice. Evolution, typically, results in behaviors that benefit me (not you), us (not them), and our short-term welfare (not our long-term welfare). So, all of that striving leads to suffering. And the way we can escape that is to somehow abandon a sense of self—or perhaps you might call it an expanded sense of self. So, how interesting is that, this mapping of pure science (I'm going to say that, science says this) onto core Buddhist thought.

**Wendy Hasenkamp** (00:13:05): Yeah. There are really very many interesting intersections. You're just speaking about the concept of self and how that needs to be expanded, or sometimes maybe even dissolves. You mentioned in the beginning of your book how both spiritual or religious imagination and secular (or scientific, potentially) imaginations, while they seem so different often, they have arrived at the same conclusion—that the concept of organism has a movable boundary, and that needs to be expanded in order to deal with the problems we're facing. So, by organism there, it jumped out at me as also maybe this idea of the concept of self. Would you say that's how it applies for us as humans?

David Sloan Wilson (00:13:48): Yeah. Let me elaborate on that and, actually, perhaps take a little time because there's something that can be said for the human world, but there's also something that could be said for the natural world. And I am trained as an evolutionary biologist. I spent much of my career studying non-human species—insects, birds, fish, zooplankton, great stuff like that. But isn't it curious that if you take, for example, the spiritual domain that I think is represented so well by Mind & Life, and you might say the Dalai Lama would be a representative of that, then let's take economics, which seems barren of any of that. It's purely a secular topic, seemingly dedicated to self-interest. Yet, at the same time, economic systems, of course, need to work at a large scale. The idea of a corporation basically treats a group as an individual, and so the goal of economics—even capitalists, even the capitalist variety—in order for it to be justified, basically you have to say, "This capitalist system based on self-interest works out for the common good. And, ultimately, at the global scale." So, whether you take the economic path or the spiritual path, there's still some sense of an organism-like quality to things that are larger than organisms, becoming part of something larger than oneself. So, they're both driving towards the same thing.

(00:15:24) Now, in biology, it turns out that everything we call an organism, such as you and me, or a single-celled creature like an amoeba or a paramecium, and they have nuclei the way that we do, or

bacterium, which don't have nuclei, or social insect colonies, which we feel impelled to call "super" organism all because these units are so darn cooperative.

Wendy Hasenkamp (00:15:53): Like bees and ants?

**David Sloan Wilson** (00:15:53): Like bees and ants and, of course, the cells of our bodies or the organelles of our cells. Their parts work so harmoniously for the benefit of the whole, that's why we call them organisms. But in each and every case, they evolved from groups—groups that were less cooperative in the distant past. So, what has become established in evolutionary theory is this idea that when groups become sufficiently cooperative, something that does not happen all that often, then what's called a major transition occurs, and the group becomes a new higher-level organism. So, that's a straight up biological result.

(<u>00:16:40</u>) And if it weren't amazing enough, then our species represent such a transition. So, we are so much more cooperative within our groups than our closest primate relatives, chimps and bonobos. Bonobos are more cooperative than chimps, and neither one are nearly as cooperative as our species. So, we could actually explain just about everything that's distinctive about our species, mentally in addition to physically, as a product of cooperation.

(00:17:10) First, we became highly cooperative, and then just about everything else that we associate with our species— including our capacity for symbolic thought and our ability to transmit large amounts of learned knowledge across generations, in other words cultural evolution—all of these could not happen without a high degree of cooperation, much of it unconscious. We cooperate in ways that we don't even think of as cooperation. It takes place beneath our conscious awareness.

**Wendy Hasenkamp** (00:17:42): You speak in your book, that I thought was really interesting, about the role of violence in pushing our ability to be cooperative, or our need to be cooperative. Can you explain that?

David Sloan Wilson (00:17:51): Yeah. You don't want to make too much or too little about the role of violent between-group or between-individual competition. In some recent work that we're doing... I work with a great scholar of evolution named Eric Michael Johnson. He just wrote a little piece that talks about what did Darwin mean by the "struggle for existence," the term that he used. And he was very careful to say that he meant it in a large and metaphorical sense. It could mean a direct struggle, or it could mean struggling against the elements—plants struggling against a drought. They're not interacting with each other at all, but the more drought-resistant plant will still outcompete the less drought-resistant plant. Or even mutualism. Intraspecific mutualisms or interspecific mutualisms that are collective succeeding and outcompeting other collectives that are not so well coordinating. All of this fell under what Darwin called the struggle for existence.

(00:18:53) Now, when we think about human evolution and the fact that we became so cooperative, it was a form between group selection. So, there has to be some sense in which some groups did better than other groups and replaced them. So, we can call that competition, but we have to do it in a large and metaphorical sense. Sometimes it was by direct conflict. Warfare, yes. Sometimes it was just fighting against the elements without groups interacting with each other at all. Those that survive the elements outcompeted those that didn't. Or it could be, of course, as collectives. They outcompeted other collectives.

(00:19:33) So, that's basically saying don't make too much out of direct conflict. Yet, at the same time, we need to be realistic, and we need to appreciate that as far back as we could measure, that direct conflict has been a very important evolutionary force, for both genetic evolution and for cultural evolution. And so, between group conflict and within group cooperation, perversely and paradoxically, have been joined at the hip. Not something we want to for the future, but something that we have to say about the past in order to just be true to what happened.

(00:20:14) - musical interlude -

**Wendy Hasenkamp** (00:20:15): You were speaking about our increasing cooperative capacity as a species. How do you like that back to the ideas we're talking about around self? Is this what you are conceiving of by an expansion of the self?

**David Sloan Wilson** (00:20:52): Yeah. When we get back to the idea of the self and try to relate it to the Buddhist discussions on that topic, what it means is, is that there's a sense in which groups can qualify as individuals, as organisms. This is also true for human groups. So, the idea that we're part of something larger than ourselves is something that, really, should come quite naturally to us. The self is not just the individual person, not necessarily the individual person.

(00:21:26) And conceivably with cultural constructions... it's very important that cultural evolution has to do some of this work because, genetically, we're really primarily adapted to life in smaller groups. What does that mean? It means that if you were to get 10 people and put them on an island and really threaten their existence, then they would probably cooperate a whole bunch. In fact, we know that this is true in life and death situations such as warfare, back to warfare. My father, who was a World War II captain of a coastguard supply ship, and so many other soldiers in all wars, reflect upon it as the best time of their life, and their love for their comrades, who they might not have known well. In fact, my father has stories about—as captain, he had nothing in common with the crew members, but when they were in a life and death situation, they had that bond of love for their comrades. And so, we have a kind of hive mind, which can be triggered by these situations. So, it's in that case that the self becomes the group, and the individual becomes a participant, who is actually willing to die for the group. That is part of the human repertoire, only triggered under some situations.

**Wendy Hasenkamp** (00:22:51): That's fascinating. It feels like, yeah, so much in our current society moves away from that idea. You were speaking earlier about economics. I'm thinking of the idea of "homo economicus" as this very self-serving, self-interested view of how we should operate. And I'm also thinking of all the research that is piling up about the value and the importance of social connectivity for our wellbeing and our health.

David Sloan Wilson (00:23:20): Let me reflect upon both of those things, and it involves our friend and colleague Jim Coan, who was just here, accompanied me to this meeting. I'd like to talk a little bit about the intellectual tradition of individualism. Before I do that, I want to note that Darwin, back in his day (that was the Victorian era), and as smart as he was about evolution, there were some ways that he thought that were just products of the Victorian culture, that he had no more ability to see through than anyone else. So, the idea that European culture was superior to other cultures—almost everyone, you couldn't find a person who didn't think that. It went without saying for him that men were superior to women. He couldn't see through his culture. And so time was required for us to see those elements that we need to discard as artifacts of the Victorian era, and then to look at the theory, evolutionary theory a little bit without those biases. Okay. So, there's a whole piece there.

(00:24:29) Well, what are our biases? What is it that we have great difficulty seeing through? What is the water that the fish can't see? And it's individualism. It's individualism. For the last 50 years, it has been an article of faith that everything has to be explained in terms of the individual as some kind of autonomous unit. And that's true for economics big time, but it extends beyond economics. It's true for the social sciences, which took a big individualistic swing—it's called methodological individualism. And it's true for evolution. This was the same period, about the middle of the 20th century, that evolution, my field of evolution, took its individualistic swing. Everything had to be explained first by self-interest, and then by genetic interest.

(00:25:21) And I think it also pervades the mindfulness-based literature. I'm most familiar with the psychological literature on mindfulness-based therapies—ACT and other forms of mindfulness-based therapies. But I think it's also true for contemplative traditions that, once again it's the individual that is the unit. It's the work of the individual to manage their minds in some sense, either through a meditational process or a therapeutic process. An unquestioning attachment to the individual person.

(00:25:55) So, part of this development of saying that the concept of the self and the organism has a movable boundary—and something above the level of the individual can be the self, can be the organism, and then the individual becomes a part of that—is what we're now moving towards. We're leaving the era, the individualistic era, in the same way that we left the Victorian era. And we're moving into this very interesting multilevel era where the level of functional organization is actually a movable boundary. And what that reveals is our need to expand that boundary, ultimately to the whole earth. So, the idea of Gaia, the idea of the whole earth as an organism, is something that does not currently exist. It is not the case that the whole earth functions like an organism. But it could. And so our job is to make that happen—is to bring Gaia into being, if you want to talk about it in spiritual terms. Or you can also talk about it in purely secular terms—our job is to create a cultural and social system that works for everyone, and for the planet. That's the secular project, and it is the spiritual project.

Wendy Hasenkamp (00:27:14): One thing you mentioned is the current state of the contemplative research world, and how it's been very focused on outcomes for the individual who is practicing, which I couldn't agree more. I think this is definitely the case and it's something that we've been aware of here at Mind & Life, and have wanted to foster and help push forward into more interpersonal relationships and social domains. In a way it makes sense, because to begin, it's one individual practicing and ostensibly changing their own mind. But then it can have a larger, obviously, a larger impact from the social domain. So, do you have any thoughts about what kinds of outcomes or maybe what kinds of frames we could bring into this field of research that can help advance into these larger units?

**David Sloan Wilson** (00:28:04): Sure. Sure, I do. And I would like to take the opportunity to showcase Jim Coan's work.

Wendy Hasenkamp (00:28:08): Please. Yeah.

**David Sloan Wilson** (00:28:10): He has his own podcast, and he has YouTube presence and so on. So just look up Jim Coan, Why We Hold Hands. But here's the short version of the story. So, he's a clinical neuroscientist, and so that means he sees clients, and he was working with an old World War II vet, who was experiencing symptoms of post-traumatic stress syndrome late in life. And the old man would not respond to anything that Jim was asking him to do. He was totally resistant to therapy. At one point, he said, "I want my wife with me." And Jim had never had that request before. But he said, "Okay," and his

wife came. At first, Jim treated his wife as a bystander, and the old man was no more receptive than before. And then his wife stepped in and said, "Let me hold his hand." And as soon as they held hands, he became responsive to therapy—very responsive, more than Jim's other patients. Well, Jim was amazed. So he said, "What is going on in the brain of this fellow?"

(00:29:15) And so he embarked upon a research program with everyday people, not suffering from any trauma. But he traumatized them with threat of electric shock—so, you're in an fMRI machine, which is uncomfortable enough. In addition to that, you have electrodes strapped to your ankle, and then there's a light which indicates whether you have a 20% chance of being shocked. So, they're stressed, and their brain is in turmoil, and he's measuring it in the machine—under three conditions: alone, holding the hand of a stranger, or holding the hand of a loved one. And the loved one condition had the same amazing effect as the old man holding the hand of his wife. So, Jim was able to duplicate the effect in any one of us.

Wendy Hasenkamp (00:30:08): In terms of reducing the threat system's activity in the brain?

**David Sloan Wilson** (00:30:12): Yes. Exactly. Holding the hand of a loved one. So this led him to something called Social Baseline Theory, which notes the following. Actually, on his podcast, the Circle of Willis, there's a pair of interviews in which he first interviews me and then I interview him. It's a fascinating story because it shows how Jim, highly trained as a neuroscientist, clinical neuroscientist and, of course familiar with evolution in a way, didn't really get this view of life the way I write about it in my book, until a certain point in his career. And he says he was looking back to our ancestral past and saying, "What's the common denominator of human life during our evolutionary history? We occupied all climatic zones, dozens of ecological niches. What was in common?" And the one thing in common was that at all times and all places, most people were living in highly cooperative groups. They had so much social support in their groups, even if those groups were in conflict with other groups.

(00:31:18) So to be in a highly cooperative group was the one constant of our evolutionary past. And because of that, the brain—our brains and bodies—have evolved to seamlessly integrate personal resources and social resources in making their many trade-off decisions. Some research by Jim's colleague Dennis Proffitt illustrates this perfectly. He takes people to the base of a tall hill and asks them to estimate its slope, which they do. And then he has them do that under a number of conditions in which he depletes their personal resources. It might be by fasting or not, carrying a heavy backpack or not, having a workout or not. And you might think that when we deplete your personal resources, then you're less inclined to climb the hill, but the curious thing is that you actually perceive the hill as more steep. And there is another case where what we perceive is different from reality. We are wired to see the world in different ways, depending upon how we're interacting with the world. So, against that background, there's a fourth condition is to add a social resource—you alone at the base of the hill, or you standing next to a friend (you're not holding hands in this case.) But just having a friend next to you makes you want to climb that hill, and makes that hill seem less steep.

(00:32:52) So what the brain has done in making its trade-off decisions with all of its perceptual correlates is, in a sense, not distinguish between its personal resources and its social resources. Both get factored in to this effort of climbing the hill. So, what that means is is that to be not in a strong, supportive, cooperative group is stressful and unusual. Based on our evolutionary past, it's pathological for you not to be in a supportive group. And the most therapeutic thing that you can do is to get you to a group of people that you know, and they know you, you're held accountable by their actions, and you're doing something important together. That's the most therapeutic thing that you can do. Not manage

your mind and do all of this stuff, which might work also. But the problem is is that you're solo. You're solo. And what you need to do is you need to enter an environment in which you have social resources that are perceived, tangible to the many mechanisms of our brains and bodies—which are largely through unconscious mechanisms, mechanisms that we don't even know it's happening. And touching is a part of that. I mean, if nobody is touching you, are you a member of a group? I mean, you could be, but to be touched—not in a sexual way, to be touched in a pro-social way—is the most reliable indicator of social support, that somebody is there at your side touching you. That is the most reliable signal that you have social support, and the brain and the body responds accordingly.

**Wendy Hasenkamp** (00:34:43): Yeah. This is fascinating. I love this line of work and the line of thinking. You bring this up with the touching in your book, too, because this has policy implications possibly for... Certainly in schools and in situations with youth, it has moved very much away from any kind of touching, out of a protective sense to avoid any kind of sexual inappropriateness from adults. But at the same time, there might be these negative outcomes of that if children aren't feeling that connectedness.

David Sloan Wilson (00:35:14): Yeah everything we do, most everything we do, has some rationale. So if you look, and now we've changed our focus a little bit, and we look at how we educate and raise our children, then everything we do has some rationale. We don't want sexual harassment, so we implement no touching rules. That makes sense. It's really important to learn the three Rs, so let's begin early. Let's have academic training in preschool. It's more efficient to split kids into age groups, so let's do that. All of these things have a rationale; they make sense. But that doesn't mean that they actually work as intended. One of the great benefits of this view of life is that it provides a different theory, a different way of looking at the world, where it can actually reveal some of these things that have terrible unforeseen consequences, and suggest things that we can do differently.

(00:36:08) That's not only true for no touch rules, but it's also true for all the other things that I just listed. It turns out that to teach academic subjects too early, not a good idea. To restrict play, not a good idea. To restrict age-mixed play, terrible idea. What ends up making sense is so commonsensical, and it's things that come for free. We were talking at dinner yesterday and everyone was reflecting upon their childhood, and they said, "Yeah. Well, when I was small, then my mom just said, 'Go out and don't come back until dinner,' and we joined up and we played in the woods. We made forts and stuff like that. And we didn't think anyone was going to kidnap us." And so, "That was so great," they say. And yes, it was. It turns out that that's the way childhood has always taken place in the distant past. And so much development—social development, intellectual development, executive function—takes place in this way, and we never knew. We never knew.

(00:37:13) So now we've taken it away, and we're finding out... Well, no, we're not finding out. Actually, all we know is we're surrounded by suffering, and we don't know why. We're basically lost in a maze of unforeseen consequences. We don't know why. And that's the benefit of a theory. That's the benefit of a right theory that actually helps explain why, and gives us some ideas. Which, of course, are never certain. And that leads to another message, is that the best a theory can do is outline possibilities, and after that, you have to experiment. Experiment, experiment, experiment. And another word for experiment is, manage the cultural evolutionary process.

(00:37:50) – musical interlude –

**Wendy Hasenkamp** (<u>00:38:11</u>): A key part of the theory that you're laying out in your book is this idea of multilevel selection. And we've been talking about it in various ways I think already, but can you just unpack that clearly for our listeners?

David Sloan Wilson (00:38:22): Sure. The quick way I do that is to ask your listeners to imagine playing the game of Monopoly. We've all played that game, and we know its purpose. It is to capture all the real estate and to drive everyone else bankrupt. So, Monopoly is all about competition among individuals within a single group—individuals beating members of their own group. So imagine playing that game. And now imagine playing a Monopoly tournament, where there's many games in play, and the trophy goes to the team that collectively develops the property the fastest. Well, it's also easy to imagine playing that game. And if you do... I actually have played it with kids. It's very funny to do it.

**Wendy Hasenkamp** (00:39:05): Oh, interesting. So, everyone on the board is trying to build the properties together as a team?

**David Sloan Wilson** (00:39:10): Together, right. So, we had them... First they were playing the regular game. Then we said, "Stop. We're going to change the rules," and then we saw what happened. It was very, very interesting.

Wendy Hasenkamp (00:39:20): Interesting. What happened with the kids?

David Sloan Wilson (00:39:21): Well, I think what everyone out there can appreciate is that almost every decision you make playing in a tournament will be different than playing the single game of Monopoly. So, that's the difference between succeeding in within-group competition. That's within-group selection. And this has a whole evolutionary counterpart. In nature, competition takes place at various levels. It takes place among individuals within groups, and that leads to Monopoly-like behaviors, disruptive behaviors, behaviors that are not good for the whole group. They're just good for me compared to you. So, there's a level of natural selection that takes place there. But, also, there's a level that takes place like the Monopoly tournament—that the behaviors that cause us all to do well can be selected compared to more dysfunctional behaviors. So, that's two-level selection. It explains why cooperation does not automatically evolve. Cooperation requires between-group selection and it's undermined by within-group selection.

(00:40:27) Now, we can stretch it out and we can think, for example, about two-level selection in which the upper level is the individual such as yourself, and the lower level is your genes or your cells. Then we see that something like cancer is like the single game Monopoly. Cancer cells proliferate at the expense of the other cells. They're winning the game of Monopoly in which you are the board! But a cell that actually participates in the body, the normal cell, is like playing the Monopoly tournament.

(00:41:03) And then we can go up in scale. So, in human terms, what we have is this dynamic that repeats itself at every rung of a multi-tier hierarchy. What's good for me can be bad for my family. What's good for my family can be bad for my clan. What's good for my clan can be bad for my nation. What's good for my nation can be bad for the world. That is multilevel selection. And what it shows is that any striving at any one of these lower levels—striving for myself, my clan, my nation, my corporation—just striving for that is going to produce suffering, dysfunction higher up the scale. And of course, all the global problems are based on lower level striving. Nations trying to grow their economies for example—it's the perfect example. Nations trying to grow their economies have led to all of these global problems.

(00:41:59) So the inevitable conclusion, another thing where we can say, "Science says this," with a high degree of confidence is that if we want to achieve global welfare, then we must select our practices with global welfare in mind. It is not the case that the pursuit of lower level interests robustly benefits the common good. That's the metaphor of the invisible hand—that somehow we can just pursue our interests without having the welfare of others in mind, and that will work out, and it's led by an invisible hand? Absolutely not. That's profoundly not the case. Now, there is a sense, maybe we'll get to, in which the invisible hand metaphor does work, but only in societies that we have constructed so that individual interests are appropriately regulated and channeled and so on. In such a society that has been created by cultural group selection, then it is possible for the participants of that society to pursue their local interests. But only in the society that's been so constructed. There's no self-organization that will ever do that for you. And we can say all of these things with a high degree of confidence.

**Wendy Hasenkamp** (00:43:12): So, how can we go about... I think part of your argument in the book is that we need to make a conscious shift and a very intentional shift into constructing these kinds of societies and systems. How can we do that? It feels like a very difficult coordination problem at the global level.

**David Sloan Wilson** (00:43:32): It is, but it's also manageable. This provides an opportunity to make some points about religions, including Buddhism, but also all religions. We can focus on their spiritual aspects, and how they prepare the mind, orient the mind towards a higher good, and so on and so forth, but that's not good enough. It must translate into action, and that action involves not just a well-meaning individual acting upon being well-meaning. There's so much structure social organization that is required for that.

(00:44:10) In my book, Darwin's Cathedral, which I wrote quite a while ago, I made a special study of Calvinism, which was a religion that arose in the Protestant reformation in the city of Geneva, which worked so well that it became a model for other Protestant faiths. And in my analysis, I showed that not only was there a catechism and a whole theology associated with it, the doctrine of original sin, and when you interpret it correctly, the whole concept of God and your relationship to God and forgiveness, all of this stuff, which is part of the Christian canon, you can really see as a way of taking the individual and orienting them to be a member of the group. In addition, there had to be a whole set of rules about who the leadership was, who makes decisions, and the city had to be divided into sectors. Each sector had to be overseen by an elder. The elder had to be accepted by those under him and by... It went on and on as to the social organization that accompanied the theology.

(00:45:13) And of course, with Buddhism, we have your monks and your monasteries and... all of which is basically being sanctioned by the state, so that people of the society in the daily round of their lives are assisted by the religion. And the religion persists in cultural evolutionary time because it works well at the societal level.

(00:45:35) And so we must create this structure. Religions have that structure, and if we want to construct something, then we must also have that structure. What's it going to look like? We can say even more than that. We can say that it needs to be multilevel, it needs to be multicellular, you might say. So, that means that there has to be the cellular level, [which] are groups. So, we have to get people interacting in groups.

**Wendy Hasenkamp** (00:46:00): Is there a certain size? You speak a lot about the small group as a fundamental unit in this process. Is there bounds on what constitutes a small group?

**David Sloan Wilson** (00:46:10): There is bounds, but it's quite contextual. So, I'll bet a lot of your listeners have heard of Dunbar's number-

Wendy Hasenkamp (00:46:17): Exactly. That's what I was thinking of.

**David Sloan Wilson** (00:46:19): ...which is, we can only have relationships with relatively small groups, 150 or so on. But, actually, that's too big for many kinds of groups. So, really, I mean 12 is the group of the Christians. Those are the number of apostles, and so that turns out to be a pretty good unit for some things. Actually, it's based a lot on the task. Do you know there's many tasks best done by a single individual? And to try to have groups do those tasks just gets in the way. Groups, there's coordination problems, all kinds of stuff. So, actually, strangely enough, if you can configure things so that we can do things as individuals, please let's. There's not intrinsically good about a group, but for tough problems, then those surpass individuals. Then you need to have the right number of groups, which need to be organized in the right way. And every business confronts this when they start out, or every nonprofit, a small number of people that are passionate, their interests are aligned. They actually don't need a lot of structure because of those reasons. But as they grow, then new people come in, conflicts arise. It's at that point that you need to add structure. But there needs to be that cellular building block, and then they need to start interacting with each other.

(00:47:42) Someone we haven't mentioned yet, but is a major figure in my book is Elinor Ostrom. And she with her husband, Vincent Ostrom, did foundational work both at the level of single groups and at the level of multiple groups, and they call that polycentric governance. What that means is life consists of many spheres of activity. Each sphere has an optimal scale. That makes sense. So, good governance requires finding the optimal scale for each activity and appropriately coordinating among the scales. How could it be otherwise?

**Wendy Hasenkamp** (00:48:17): Seems straightforward. Yeah. [laughter]

**David Sloan Wilson** (00:48:19): And yet, governance is seldom like that. So between a combination of Ostrom's work on single groups, generalized from an evolutionary perspective, and I was privileged to work with Ostrom, that's what we did. And then the idea of polycentric governance provides the structure that's needed to go along with the theory and the psychological orientation that motivates individuals to take part in all of this. We could go to any locality and pick any topic. It might be sustainability or health or urban renewal or something that needs to be done, and then we can, in the first place, form groups, action groups, teams to do it. That's going to be a big part of the solution because that's going to be great for individual thriving. Individuals come to life in that situation, and then they're more efficacious as a group than they ever would be just as an individual.

(00:49:17) Just think if you really wanted to take sustainability seriously, you wanted to recycle and do all of that stuff, eat right and stuff like that, and you were to do it as an individual, compared to joining a committed group to help each other do that. I think anyone can see that that [the group] would work better. Then you can work with those groups to be strong and to achieve their purpose. And then to make sure their purpose is actually prosocial up the scale. That they're part of the solution, not part of the problem in what they're doing so well. So, we don't want to offer this to street gangs or drug cartels or terrorist cells. We want to offer it to groups that actually want to extend their prosociality up the

scale, and that's going to be very experimental. As we've just said, nobody really knows what to do. All we can do is make our best guesses, and then we have to experiment. That's variation and selection, variation and selection with the higher good in mind.

(00:50:13) It's at that point that we can then take what we call the mesoscale—micro is a single group, meso is a multi-group ecosystem—and then coordinate that with other mesoscale units. And it's at that point that you could imagine working up to the macroscale, which is the global scale, providing the values for all scales, and the ultimate goal for coordination and structure. So micro, meso, macro can be applied to any domain. We're beginning to think that here we have a plan for a structure to go along with our meaning system that orients, that motivates the whole thing psychologically.

(00:50:53) – musical interlude –

**Wendy Hasenkamp** (00:51:15): Another thing that came out of the work you were just mentioning was a set of what you called core design principles. Could you go through those briefly? They seem to be really good advice for groups wanting to work in this way.

**David Sloan Wilson** (00:51:29): Right. I'd be very happy to do that. And I can do it in two stages. One is as Elinor Ostrom developed them, and then as why they make so much sense from an evolutionary perspective, and why they're so general.

(00:51:42) So, Ostrom was a political scientist, and she studied the famous tragedy of the commons—the idea that when a group of people are drawing upon a common resource, such as a forest or a pasture or fishery or the groundwater, let's say that there's a temptation for each member to take more than their share, and that leads to the overexploitation of the resource. And this was treated as kind of inevitable, and the only way to prevent it would be either to privatize the resource so that each individual manages their patch, and that's sometimes not possible, or to impose some top-down regulation. And what Ostrom showed by actually studying groups-

Wendy Hasenkamp (00:52:24): Groups that had done it successfully?

**David Sloan Wilson** (00:52:26): Well, any group that's trying to do it. What she showed was, and a lot of these were traditional groups (not all), that in the first place, they varied in how well they managed their resource. Not everyone did it well, but some did. And those that did possessed certain what she called core design principles. It was the blueprint for managing their commons.

(<u>00:52:51</u>) So, those core design principles, here they are. And I want your listeners to have some group in mind, some group that's important in their lives to see if these core design principles might work well for their groups.

(00:53:06) So, first and foremost, there must be a strong sense of identity and purpose. The members must know that they're part of a group, that it's an important group. Who's in? Who's out? What they're supposed to do. So, a strong sense of identity and purpose was critical.

(00:53:23) Number two, proportional costs and benefits. It's not sustainable for some members to get the benefit while other members do all the work. There has to be some sense in which what members get from the group is proportional to what they give to the group.

(00:53:38) Number three, decision-making should be inclusive. It's not sustainable for some members of the group to call the shots and for others to be cut out of the decision-making process. It need not be by strict consensus. We have efficiency considerations, but there has to be some openness and transparency to the decision-making process. In part because members have something to contribute to decisions. If decisions are made without some members, well, you're losing information.

(<u>00:54:08</u>) Number four, monitoring agreed upon behaviors. Unless we can actually know whether you're behaving as we should then, of course, misbehaviors can take place.

(00:54:20) Number five, graduated sanctions. Let's say that you're not behaving as you should. Something needs to be done about that, but it need not be mean or harsh starting out. Religions have many great examples of this—that of brotherly admonition is the first step, is "Hey, brother. Come on." That keeps most people in solid citizen mode, but not always. In those cases, it is necessary to escalate, ultimately, to exclusion. Also, in addition to sanctioning misbehaviors, it's important to praise good behaviors. So the rule is abundant praise for good behaviors, coupled with mild punishment for bad behaviors that escalates only when necessary.

(00:55:09) Number six is conflict resolution. Conflicts will occur, eventually, and they have to be resolved in a way which is passed and perceived as fair, because most parties of a dispute think that they have a point of view, and it shouldn't be just about winners and losers. It's about reconciliating conflict.

(00:55:27) Number seven, local autonomy. For a group to do those other things, it must be able to manage its own affairs. So if they're being constrained by outside forces, they simply cannot do those other things. So, elbow room is required.

(00:55:43) Then finally, number eight, appropriate relations with other groups. And those relations must reflect the same design principles that exist within groups. This is so important because it means that these core design principles are scale independent. They're needed for intergroup relations in addition to within-group relations. All the way up to, for example, discussions of the European Union, and the global economy, international relations, are all going to reflect the same principles. And we get so much insight by taking these large scale problems and shrinking them down and asking, "What would this look like if it was just a single small group of individuals? What would it look like?" and then expanding it back up.

(00:56:29) So, there they are, the eight principles. And I think that most of your listeners are thinking, "Yeah, that might apply to the group that I had in mind." And what I did with Lin Ostrom was to show that these principles are not just needed for managing common pool resources, they're useful for any cooperative endeavor at all. There's a sense in which cooperation is a common pool resource. And if you look at it from multilevel selection terms, what you can see is that if these core design principles are strongly implemented, then it's very hard to play the single game of Monopoly. Just try it. Just try to do something that's in your interest and not in the interest of the group and see what happens.

(00:57:13) So what the core design principles do is they protect you against disruptive self-serving behaviors, including those that are unconscious and well-meaning. Many groups function poorly not because there's a selfish individual, but let us say there's somebody that's so passionate about the group

that they try to override other people. So, they have the welfare of the group in mind, but they're being domineering in how they do it, for example. Or somebody that's so passionate that they volunteer to do all the work, and so you get this big work imbalance, and then they burn out and so there wasn't proportional cost and benefit. So, it's not just a matter of well-meaning people versus selfish people. It's much more complicated than that. If you think of a group that's deficient in these core design principles and imagine someone playing the single game of Monopoly, well, it's likely they could get away with it.

(00:58:05) And so what implementing those core design principles does is, it accomplishes a miniature major transition in cultural evolution. So now, most of the change that takes place is going to be the teamwork variety, not the disruptive competition variety. In my book, I review many kinds of groups, schools, neighborhoods, businesses, and much of my research is now centered on actually working with groups in real-world situations in order to help them implement the core design principles, and in other respects, evolve their futures.

Wendy Hasenkamp (00:58:41): Is that your work at the Evolution Institute?

**David Sloan Wilson** (00:58:43): Yep, and Prosocial. So, if you go to prosocial.world, then there's a website that explains all of this. And with two colleagues, Paul Atkins and Steve Hayes, we have a new book coming out called Prosocial, which at book length explains this methodology, basically, for helping groups internally, and in the construction of multi-group cultural ecosystems.

**Wendy Hasenkamp** (00:59:09): Great. I appreciate how you were saying that those core design principles can level up to larger scale. Are there any examples of... You mentioned the global economy, for example. Are there any examples of ways that these have been taken up at large scales, or is there any movement there?

**David Sloan Wilson** (00:59:29): There's lots of movement, and we can begin with a comparison of nations. Our current nations—what is there, 195 of them or something, almost 200 nations—and when you study them, they vary tremendously in how well they function. Just like the groups studied by Elinor Ostrom. And there's books written on this topic. One is called The Spirit Level. The other is called Why Nations Fail. And what all of these books show is that the nations that function best are the most inclusive ones. They do the best job sharing the benefits of the society. And, to make a long story short, they're the ones that implement the core design principles at the national scale. The nations that work least are called extractive, and they're run by a small group of elites for their benefit, not for the benefit of the whole nation. So without any assistance, cultural evolution at this scale has resulted in the same kind of variation at the national scale as what Elinor Ostrom found for small groups.

(01:00:33) Then in each case, you can ask, "What is it about the history, the cultural history of the group that led them to this benign outcome?" And here's where cultural evolution reveals a static side—that if you're starting out, for example, in extractive mode, then it's pretty difficult to change. There's a kind of stability to these dysfunctional forms of government that makes it not so easy to change.

(<u>01:00:59</u>) So for example, all of the European colonies in Central and South America, by the Portuguese and the Spaniards, in part because they were interacting with societies that were already hierarchical and extractive native societies, they remained in extractive mode. So, if we look at the problems with many (not all) Central and South American countries, we find the legacy of the extractive social organization.

(01:01:26) In North America, and there's fascinating stories to be told about the first British colonies, Jamestown, and these things we learned about in American history, actually, starting out extractive—because, after all, England was a feudal society, it was not egalitarian at that point—but, nevertheless, being forced by circumstances to become more inclusive just to survive as colonies. And then as they go up in scale, then that inclusive mode forced upon them by just survival of the scale of smaller group, then became a model for the 13 colonies. And also they borrowed from the Indian federations that they knew about.

(01:02:07) So there's a different story for... I just told two stories. If you look at Scandinavia, there's another story, the Netherlands, there's another, Switzerland, there's another, Japan, there's another. So different nations occupy the good end of the variation for different reasons. And do you know, they also fluctuate during their histories? My colleague Peter Turchin has a wonderful book called Ages of Discord. And Ages of Discord is a very detailed analysis of American history and how it has actually fluctuated in its degree of egalitarianism and inclusiveness with corresponding differences in welfare. So in the 1830s, which is when Tocqueville visited America, it was highly egalitarian. That was called the era of good feelings by historians. Well, then that led to the Gilded Age, and the Civil War, and the Great Depression, extreme income inequality, great social unrest. So, that was the worst of times. That led to the New Deal. Another era of good feelings—for some not others, because there's always people that are excluded, women and minorities. So we don't want to be too romantic about this, but, nevertheless, it was the case that there was much less income inequality, rich people were taxed, things like that. Then that led to the Reagan era, and our current situation, which is, you could call a second Gilded Age.

(01:03:38) So that's how dynamic cultural evolution is. And the optimistic conclusion to draw from that is that we can change. And in a sense, we know how to change. Yes, we do have to take our cultural history into account. So we have to change based upon our past, and that might be different in details than what another country like Norway might need to do, or any country. So it's not as if history is unimportant. There is such a thing as path dependence. But, nevertheless, we have a functional blueprint to follow in the form of these core design principles.

(<u>01:04:17</u>) – musical interlude –

**Wendy Hasenkamp** (01:04:34): I want to touch back on the ideas of religious and spiritual imaginations that have come up a couple of times. I'm curious about your own experience and your own path in this work, and in your own life. You mentioned in the introduction of the book that you've now learned to become "bilingual" in terms of speaking the language of secular or scientific approaches, but also these ideas of spiritual or religious views. Can you just say a bit about how this has affected you personally?

**David Sloan Wilson** (01:05:05): Happy to. I'll make it as brief as possible without leaving out important details. To begin, I had a thoroughly secular upbringing. My dad was a famous novelist, Sloan Wilson, and he scorned religion. He made fun of it. He thought it was hypocritical. My mom would call herself an agnostic, but I seldom saw the inside of a church. At the same time, both my parents were nurturing and warm and, certainly, had you might say Christian values or moral values, and so I was certainly taught to be nice, and I think I'm also that kind of person by temperament. I do have a prosocial temperament.

(01:05:44) So that led me to study prosociality. As a biologist, I entered the field at a time when this individualistic swing that we've been talking about was in full force. And altruism never evolved; everything that did evolve was a form of selfishness. So, prosocial me rebelled against that and then sought out, basically, ways to explain the evolution of altruism and prosociality at face value. So, that

fitted my temperament. And I also gravitated, in part because my dad was a novelist, to this prospect of studying and understanding the human condition. He did it it through the lens of his personal experience; I could do it through the lens of a theory. But to ponder the big questions, especially about humanity, from an evolutionary perspective was something else that was taboo at the time. My namesake, Edward O. Wilson, when he wrote his book Sociobiology in 1975 got in trouble for trying to extend sociobiology to the study of humanity. But for me, that was alluring. So these heretical theories of group selection and human evolution, I saw as an opportunity. But never did I become involved in any kind of religious or spiritual practice myself. For me, it was always an intellectual topic.

(01:07:12) All the way through just studying religion per se, Darwin's Cathedral, that was in 2002, always an intellectual project backed up by a prosocial temperament. But always envisioned in thoroughly secular terms. And to this day, I would, first and foremost, call myself an atheist—if by that we mean avoiding any belief in supernatural agents or anything else that counts as counterfactual. Everything I do, I want to be firm within the bounds of what we might call methodological naturalism.

(01:07:46) Then I met an interesting fellow named Kurt Johnson, who like me got his PhD in evolution biology, but unlike me became an ordained episcopal monk between his Master's and PhD, and then has become a central figure in what has become known as the interspiritual movement, which is an advanced form of interfaith and ecumenical thinking. And the way Kurt describes the interspiritual movement is that all spiritual traditions, along with many secular traditions, arrive at a common awareness of rich interconnectedness. The world is richly interconnected. You can come to appreciate that by any number of routes. Once you do and you thoroughly reflect upon rich interconnectedness, then it leads to an ethical conclusion. Namely, the futility of one part of the system attacking another part of the system. That seems just plain futile. And so you seek systemic solutions more than you might otherwise.

(01:08:53) So this awareness, and its ethical conclusions, create a common meeting ground for all of these spiritual and secular traditions, a common ground, which is called second tier consciousness. First tier consciousness is any particular tradition, which remains valuable, not something you necessarily want to lose or even could lose. So, you have your first tier consciousness, and you have your second tier consciousness. That is the interspiritual movement. So, I began to actually engage in some of the experiential practices that I had never done before, and actually don't feel very comfortable doing.

Wendy Hasenkamp (01:09:36): Could you give an example?

**David Sloan Wilson** (01:09:38): Yeah. There's one example, and one reason I love doing it is... back to intellectual, I can see what's happening intellectually, what it's doing. But that does not detract from its force. So, there's a ritual called the Mesa, which is I think based on Native American practices in which you're going to meet and you're going to do something as a group, but first, you create this ritual space. And it includes nice cloths, which have symbolic value, Kurt brings cloths that represent the colors of the different major religions. There's candles, so we have light. And then there's objects, which are important objects. You might call them sacred or not, but it might be a fossil or it might be a cross or a religious symbol. It might be a statue of the Buddha. And then every member of the group is asked to contribute something to the space that represents themselves. When I did it, I had a pen. It was just a cheap pen, but because I value writing, it was important to me. Someone put their belt buckle. Anything of significance to you, you put in this space. And then you stand around and you hold hands.

Wendy Hasenkamp (01:10:54): Back to handholding.

**David Sloan Wilson** (01:10:55): Back to handholding. Absolutely. Back to handholding. And then some words are said about the conversation that we're going to have. Then we were instructed to hold our hands cupped in front of ourselves and to say our names, and then blow it into the space: "I am David." [sound of blowing] And then we sit down and we have the conversation. Compare that to a business meeting where you file into some room with Dunkin' Donuts and fluorescent lighting, and just commence to talk. So this was profound for me, even though I could understand what was taking place, "Yeah, we're cultivating a sense of 'we'ness. I get that."

Wendy Hasenkamp (01:11:41): Still works. [laughter]

David Sloan Wilson (01:11:42): But it still works. There did not have to be any supernaturalism at all. I could understand it in purely secular, psychological terms, and yet, it worked. And the conversation that took place was so much deeper and deliberate. What would happen would be, there would be long pauses during which people were thinking, and then someone would begin to speak, and had everyone's full attention. Then another long pause, and then somebody else spoke, and so on and so forth. Then you end the ritual with another handholding and a clapping of the hands and so on. So, I think this reveals something, which is obvious really, that the experiential component this—you can even understand it in a strict learning sense—adds so much to the intellectualizing. So there's an example of how I began to participate in some of these things, and to become quite won over by them.

(01:12:47) Also, I began to think that there are forms of... ways to think about such things as gods and deities that did not require me to believe in any supernatural agency. And the idea of Gaia I find interesting that way. Gaia is a goddess, a spirit as an organism. So, I can sign on to that. Now, I know as a scientist that the earth is not functioning as an organism now, but it can be. And so the idea of earth as a goddess that requires our help to bring into being... Okay, if that's the idea of god, then sign me up. I can sign on to that. But the only reason I can is that it remains fully within the boundaries of methodological naturalism. I do, for myself, I insist upon that. Yet, I also recognize that lots of ideas that go beyond those boundaries are very motivating, and so on. That's why we believe in them. So I think I understand them at the same time that I am working towards a meaning system that does not require them. It's very important to me to function in that scientific mode.

**Wendy Hasenkamp** (01:14:06): Well, this has been wonderful. Do you have key takeaways that you hope that listeners might glean from this, or from your book, about next steps we might take as a species?

David Sloan Wilson (01:14:17): Well, I think that one reason I'm so honored by the opportunity to speak with the Dalai Lama and to be involved with the Mind & Life Institute is that I do see this great common ground, you might say, in the objectives, and that's amply reflected in our conversation. When you think that there's this whole secular wing, and this whole spiritual wing, and the need to become bilingual to combine them, then that is the prospect before it that does require this social development. So really, there's so many individuals and groups—many hundreds of them, really—that are oriented towards this. But unless we actually work on that structure... We have to go beyond being individually motivated or psychologically motivated. We have to build that structure that we talked about. And so that is a little bit like building a cathedral, you might say. It might take decades and maybe even centuries, but it's what we need to do. So for me, the most suspenseful thing is, can we proceed to this stage of actually building this multicellular society, getting people into groups, and getting those groups communicating with other groups and building this micro, meso, macro structure. That's the building project that's in

front of us. That's what I most want to do, where I'm devoting most of my efforts, and where I most want to partner with organizations such as Mind & Life, plus many others.

**Wendy Hasenkamp** (01:15:53): Wonderful. Well, thank you so much for your work and for taking the time to speak with us today.

David Sloan Wilson (01:15:57): Thank you.

**Outro – Wendy Hasenkamp** (01:16:04): This episode was edited and produced by me and Phil Walker. Music on the show is from Blue Dot Sessions and Universal. Show notes and resources for this and other episodes can be found at podcast.mindandlife.org. If you enjoyed this episode, please rate and review us on iTunes and share it with a friend. If something in this conversation sparked insight for you, we'd love to know about it. You can send an email or a voice memo to podcast@mindandlife.org. Mind & Life is production of the Mind & Life Institute. Visit us at mindandlife.org where you can learn more about how we bridge science and contemplative wisdom to foster insight and inspire action towards flourishing. There you can also support our work, including this podcast.