

The Future Is Calling Us to Greatness

with Michael Dowd + 56 Experts



Evolutionary Lessons from a Living Planet

with Elisabet Sahtouris

Big ideas from this session:

- Really big lessons we can learn from really small bacteria
 - Why honoring Big History and a consortium of sciences is vital for moving forward
 - Evidential mysticism, sacred science, Gaia, and the future of humanity
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Michael: Elisabet, thank you so much for being part of this conversation series, *The Future is Calling Us to Greatness*. I've been looking forward to this call for a long time.

Elisabet: Lovely to be here with you, Michael, even if we are halfway around the planet from each other.

Michael: Well, that's the beauty. I mean it's like the technology allows for this kind of a thing with a good call and visual representation. I'm grateful that this kind of technology exists.

Elisabet: Me too.

Michael: Elisabet, what I've been asking all of my guests at the beginning to do is to just share a little bit, assuming that not everybody knows of you and your work. If you could just share sort of who you are, what you're best known for, what you're particularly passionate about, I mean sort of a little background.

Elisabet: Okay. I'm an evolution biologist by training and I say that makes me a deep pastist in order to be a good futurist.

Michael: Amen!

Elisabet: Because if we don't know anything about the past trajectory, it's very difficult to try to figure out where it's possible for us to go. That's what I do. I run around the planet and talk

to anyone who will listen about my discoveries of biological evolution and what they mean for humans today.

Michael: That's awesome! Say a little bit about—because this has been a passion and we've known each other for what—25 years or something like that. Share a little bit about sort of who have been your mentors and share a little bit about your writings in this field.

Elisabet: Yeah, well, as I said, I was trained as a scientist. I did my post-doc at the Museum of Natural History in New York City. I kept asking these big questions about who we are and where we came from and where we're headed, having figured out by then, as I didn't know in childhood when I asked them, that they were the great philosophical questions of the ages.

I went to science to find out more about humanity and our trajectory because I assumed that was where you got the truth, that's where you got the real information. Unfortunately, I didn't find a lot of fellow scientists who wanted to talk about such questions. They were supposed to be off in the field of philosophy somewhere.

Well, my understanding of ancient Greece was that philosophy was the name given to natural science, actually, *philos Sophia*. Lover of wisdom was the designation of science because the purpose of science was to study nature to get guidance in human affairs.

Michael: Amen.

Elisabet: But that just wasn't happening and one of the paths that took me on was to really look deeply into the foundations of science, which are not facts that were discovered by science, but the story on which science has to be built. The other place it took me was to try to go back into evolution biology, looking at it from my own perspective. To do that, I ran off to a Greek island for a 13-year midlife retirement. That was a wonderful way to do it.

Greece is in the mid-earth sea, the *Medi-terra-and ean*, literally mid-earth. It was a great place to get perspective on the cultures that are both north and south of the mid-earth sea and east and west of it. I now live, once again, in the mid-earth sea after spending almost 20 years in the United States. In between, I'm back on another island in Spain this time, on Majorca.

Michael: That's awesome! I remember when I first—I think it was your book *Gaia* that I first read, oh, gosh, it must have been 1987 or '88. It was right around the same time that I was sort of being introduced to two of my great mentors, Thomas Berry and Joanna Macy. Then there was a book that I don't know if it ever got published, but it was one of my favorite things I've ever read of yours. It was called *Gaia's Dance*, if I recall. It was basically for young people, for teenagers. Did anything ever come of that because I just thought the world of that book?

Elisabet: You know, that's very interesting, Michael. I don't know what's going on here. I dusted that off out of I don't know how many computers it had been transferred to by now. But last year I actually updated it and got the wonderful Betty Sue Flowers to look through it and do a good light edit on it. I haven't done anything with it since! I haven't even put it up as an eBook. I've sent it out to some people, but I'm just—I'm a creative person who's not very good at marketing what I do. I let it sit in closets and computers.

Michael: Well, if there is any way that I can support you in getting that book out, even if it's just an eBook or whatever, because I really—I mean I loved all your writings, but there was something about that that just spoke in simple, understandable language that gave young people and people of any age the big picture.

One of the things I've always loved about you and your work is that you really do bring in just a solid philosophy of science and just an understanding of philosophy in general with the science itself, but also always attentive to the meaning and the practical value. I mean how does this inspire us? How do we need to take our best understanding of reality in ways that help us live in right relationship to reality, because if that second part isn't done, what's the use if we just simply create technology that then destroys the biosystems upon which we need to survive? I really would love to see that book of yours get out to the world. If I can support that in any way, let me know, please!

Elisabet: Okay, I will. I will. I will.

Michael: Elisabet, one of the things that I'm trying to do in this series is really sort of lean into this intersection of science inspiration or meaning or values and sustainability. I apologize. In the background, I think there's a garbage truck outside, so there's a little noise. I don't know if you can hear it. But if you could share just a little bit about...

Elisabet: That's good. They're the great recyclers.

Michael: Yes, exactly, yeah. But if you could share a little bit about sort of how you came into—a little bit of your story, how you came to this sort of intellectual and heartfelt passion that you have and have been contributing now for decades.

Elisabet: Well, I don't know. I was born a cosmic snoop and I don't know if that comes from other lives or where, but I've always asked questions about absolutely everything, driving my kids crazy. They sometimes say, "Why do you need to know all these things?" I can't really explain it. I just always did want to know how everything works, and I became a context chaser once I realized that context is what gives meaning.

A rose is not a rose is not a rose to all observers. A rose is a very different thing to a perfume manufacturer as it is to a lover or a scientist or a donkey who wants to eat it. You have

to see the context that something is in in order to understand its meaning in relation to the larger whole.

Since I wanted to know my relationship to everything, I had to chase contexts all the way up to the whole universe. I came in wired that way. It's not something I had to struggle to do. I had to struggle often to undo it because people were constantly saying, "Why don't you look at things that are more manageable?" Well, I wasn't out to manage the cosmos or anything else I studied. I just wanted to know how does it all hang together?

Now the good side for me of what's been happening over the past decades is that more and more people have questioned the foundations of science, of western science, as I say, because the earth has had many sciences. Western science is one of the—is the newest one, the new kid on the block. It's based on some perceptions that the founding fathers of science had that have permeated everything science has done and discovered.

While people go to science for facts, if you look at the underlying story, it's not factual that this is a non-living universe, for example. That's what the founding fathers saw because they were all inventors and machinery was really hot when western science was invented a couple hundred years ago. You can see how they reasoned if the cosmos was a big machine, wow, they could understand it. They were engineers. They knew machinery inside out. They knew how to make parts and assemble them to get things done.

Science started out wanting to control things toward human ends. That was a very heady idea, but whoever said it was so? A lot of other cultures have had sciences and none of them ever came to the concept of a non-living universe. It's absolutely unique.

I think it's very important that when people look at science, yes, it's based on research, but the research itself is based on a cultural story that people found persuasive. It's whatever seemed to obvious to them. It must be non-living. Life must be something that came out of that non-living universe. Consciousness must be something that somehow emerged when that non-living universe, through all its random actions, managed to get a trajectory we call evolution. I stumble over the words because it's never been persuasive to me that a series of accidents could lead to us. That's one of the things I did.

If it wasn't a non-living universe, how about it was a living universe? What if you made that assumption? How would it change all the theories that you then developed? What if it was participatory rather than something you could look at objectively apart from us? What if life didn't come from non-life, but the universe has always been in the business of creating—self-creating living systems? What you would call "God" is the universe self-creating reality, whatever you call it.

Michael: Yeah, no, amen. I mean one of the things that I still attribute to you in terms of the first time I ever heard it was back, again, in the late 80's, where you drew a distinction between mechanistic and autopoietic or self-organizing systems, and that we—there's always a concern or there's often a concern to not anthropomorphize, but we're not very conscious of mechanomorphizing, that is attributing a non-living mechanistic attribute to the natural world. I was wondering if you could say a little bit more about that.

Elisabet: Yeah, well, that came back, of course, from my graduate school days when I realized that we were constantly expected to mechanomorphize. I would be accused of anthropomorphizing, and that was the big sin. Never project human qualities on to the rest of nature. I got over that, by the way, when I ran into a wonderful Swiss botanist who said, "It takes a living system to know a living system." If there isn't something alive, it can't recognize another thing that's alive.

But anyway, I then started saying, "Well, mechanomorphism is second-hand anthropomorphism because humans invented machinery." That just didn't make me popular in graduate school, but I've always used that term ever since. Why do we mechanomorphize when we're not allowed to anthropomorphize is pretty ridiculous when you really look at it.

Of course, again, that was because science wanted so badly to make everything clean and neat and machine-like, right? Well, we discover over and over as Charlie Chaplin in the old—remember the movie where he gets caught in the gears and wheels of the big machine. He was spoofing that whole idea of turning humans into parts of a machine, inventing all our governments and our healthcare systems and our schools and everything as mechanisms and figuring out who's got the perfect social mechanism so the culture will run smoothly forever.

Well, it's just not like that. We're making this up as we go. I think I said to you in an email today or somewhere online today. I posted a comment when they said something about certain aspects of humanity creating its reality. I said, "Well, when did we ever not create our reality?" Right? We're participants in this game. Everything humans have ever made started out as a thought in somebody's mind, and then we manifested it by—I think one of the reasons for physical world is to unpack creation, to slow it down to where you have to chop down a tree and make boards and dig up metals and make screws and put it all together if you want a table rather than life in your dream world where you think table and the table is there. It's easy.

Maybe the physical world is an experiment on the part of the self-organizing living systems cosmos to see how slow can we make creation to really get that we're creators, not because we should project our machinery onto the cosmos and think the whole thing is a machine.

Michael: Yeah, yeah. Well, I think—I was having a conversation with somebody just last week because I've been doing a lot of preaching this year specifically on—I reread Martin

Buber's famous book *I and Thou*, and we just have no evidence of any culture that's been able to survive for any length of time by having an I-it relationship to whether you call it the cosmos or nature or the universe or reality or Gaia, whatever, but if we don't have a respectful, honorable relationship to this larger—talk about context—this larger reality in which we live and move and have our being that gave us birth.

I mean we use the word environment. I sometimes say that the environment is not our surroundings. It's our source. That's what gave us birth. The ancients—what we call the environment—the ancients called God or the Goddess or the Gods. What I appreciate about it...

Elisabet: They didn't give it a name because it was so—it didn't need a name. It was like indigenous people don't hang up shingles on the doctor's hut and the lawyer's hut and the teacher's hut because everybody knows that they have a way of life that different people contribute to and everybody knows who does what.

But you're so right about that. I've tried to drop the word environment from my vocabulary altogether because it's seen as something apart from us, as you say, and just a source of resources, a pile of resources for us to exploit.

Michael: Exactly.

Elisabet: We all know where that's gotten us. I talk about ecology. I talk about ecosystems because it feels more inclusive. We're part of our ecosystem. It's not separate from us. It's not an environment out there. Also, I like to—today I was just looking at the poems of the new women poet laureates in the U.K. I was sorry to see that they're still not capitalizing Earth when it's used as a planet rather than soil. We wouldn't dream of saying the Mars is red or the Venus is hot, and yet we do this the Earth with no capital letter all the time.

That's one of the vocabulary changes I hope to help people make to start calling her by her proper name, the way we do Venus. Another one is to stop talking about discussion and talk about dialogue unless we mean a conversation that's intentionally separative. Percussion, discussion, taking things apart. Science is percussive in that way. It isn't in a dialogue with nature. It's in a one-way, pick it apart, look at the pieces and somehow think you can reconstruct the whole from that.

Michael: Yeah, no, exactly. I mean one of the quotes that I use in my evening programs is from Thomas Berry. I actually have it memorized. He says, "The world we live in is an honorable world. To refuse this deepest aspect of our being, to deny honor where honor is due is to place ourselves on a head-on collision course with the ultimate forces of the universe." He said, "This question of honor must be dealt with before any other question. It's ultimately not a political, economic, or even an environmental issue. It's ultimately a question of honor. Only the

sense of the violated honor of Earth and the need to restore that honor will awaken in humans the passion and energy needed, the activity needed to ensure a just and healthy future."

Elisabet: Yeah.

Michael: I think it hugely matters how we think. I mean, again, this may be something that you originally influenced me. I don't know because I've had this sense for at least 25 years, which is just as you were articulating, in fact, I used some of the same words. That's why I was thinking, "Wow! Maybe I got that from Elisabet," is that capitalizing Earth.

Elisabet: You were one of my first fans.

Michael: I think so. I think so. In fact, I wrote—the first thing I ever had published in my life was in 1989 in Richard Rohr's magazine back then. I think it was called *Radical Grace* or something like that. It was just a little short piece called "Earth," capital E or "the earth," little e. "What's in a Name?" I was making some of the exact same points that you were just making.

Elisabet: Yeah, yeah.

Michael: Elisabet, anything else that you'd like to say about why—I mean the title of this series is *The Future is Calling Us to Greatness*. I've been coming back to this theme that when you have a deep time perspective and hold in your heart and in your mind the fact that countless generations have contributed and sacrificed and suffered and struggled, and in fact, if it weren't for that, you and I wouldn't be alive. None of us would be alive.

When we hold that kind of thought in our hearts, we can be inspired to deal with the challenges of our day with the sense that the past is rooting for us, and also this sense that future generations are calling us to greatness, calling us to forgo certain pleasures that perhaps we could pursue for ourselves for the sake of something larger and more important especially the future. Anything that you'd like to say about that particular theme, the sense that the past is rooting for us and the future is calling us to greatness?

Elisabet: Yes, I do, but as a prologue to that, I want us to stay for a moment with your calling us to honor the Earth. One of the big barriers to that is that western science really doesn't understand life very well for the simple reason that they've always used the mechanical metaphor and have always analyzed everything as machinery.

As you said, I distinguish between autopoiesis, self-creation, life and alopiesis, which is other created machinery. Machinery is created from the outside by an external creator. You came to the internal creator view as a Christian. It's not something that's so difficult to bring together science and religion for people like us, but when you see everything as mechanism in nature, you don't honor it the way you would if you saw it as life.

Now in the last of the symposia, international symposia on the foundations of science that I convened, it was for Islamic scientists. By then, I already knew that western science was based on a non-living universe and that eastern science, as in Vedic science, was based on a conscious universe. I found that Islam is based on a—Islamic science is based on a living universe.

I finally found a science that explicitly called this a living universe, and even though their first premise is that God created it, their second one is that it is a living universe that they were instructed to study by their god named Allah, but as a monotheistic religion.

So I was thrilled and I said, "You're not going to get your credentials from western science even though I think western science should acknowledge any science willing to expose its foundational beliefs and then prove that they do theory and practice in the proper research way." I said, "You won't get credentials from western science, but you can teach Islamic science in parallel with western science, not confusing them. The way you'll get known is if you do something western science hasn't done. The first thing I'd recommend is that you do a science of economics because we don't have one in the west. We have a superficial, neo-Darwinian view of greedy man and competitive struggle, but we have no study of living systems as economies in a formal way."

So anyway, I wanted to do that little prelude and having said that, my biggest discovery about evolution and looking back over 4 billion years of it was that there's a maturation cycle going on. All of those 4 billion years, species have gradually expanded in the youthful phase, being very competitive, very Darwinian, knocking out your competition, climbing the king of the hill stuff in order to expand territory and take as many resources for your own species as you could.

But that gets very energy expensive. The turning point for a species, the way they mature from hostile competition to mature collaboration/cooperation is when it gets too energy expensive they start to negotiate with whoever they're trying to bump off and gradually bring them into a friendship alliance, a cooperative alliance to form mature community. That's exactly where humans are now.

The first creatures on earth to do it were the ancient bacteria, who had Earth to themselves for half of evolution. When they formed the cooperative nucleated cell, the kind we're made of, that never had to be reinvented. It was so good. It's a collective of different kinds of ancient bacteria that gave up their individual lives to work in community.

They then were new on the planet. This is what's so important. Once you form such a new cooperative, it too is a new being on the planet that has to go through its own evolution. The single big cells and nucleated cells took another billion years before they formed

multi-celled creatures as their collectives. That's, of course, the second big stage in evolution to make.

Now we humans come along as multi-celled creature and we go through the same process. We have families and tribes and finally the tribes get together and form the first cities as cooperatives. We're only now finding these all over Earth. In the Orkney Islands in northern England, in the Amazon, in the Middle East, in Africa, it's turning up everywhere, these wall less cities where different tribes got together to trade, to exchange information and goods, possibly to worship in common or to exchange their stories of how they worshipped and how they did things, but they were peaceful. They were cooperatives.

Okay, what did I just say has to happen with a new cooperative? It goes into juvenile mode. It's new. That's where empire building began. Now we're at the end of 6,000 to 10,000 years of the cities becoming centers for empire expansion, and we've reached the Earth limits. We're in the third phase of expansion of empire. First it was real emperors, then it was national empires. Now it's corporate empires, all the same process, same juvenile process. All over Earth now we're seeing signs that we're getting over this hostile competition and moving into collaborative ventures. That's what will save us.

Michael: Yeah, yeah.

Elisabet: It's often driven in biological evolution by crises that force the cooperation and boy, don't we see that? In Fukushima, it was 100% cooperation. Tell me we're naturally hostile, competitive creatures, when in an instant, we can turn into total, 100% cooperation just because we're facing a disaster together.

Michael: Yeah.

Elisabet: to me, global warming is very real and it's one of our big elements of our perfect storm of crises, and that is too bad that with our foresight we don't preempt this and get cooperative without the crises. Too bad we have to be driven by crises into cooperation, but at least there's hope that we'll do it.

Michael: Yeah, yeah, in fact, that's exactly where we are is that only cooperation at a multi—if corporations also are multi-cellular organisms, we've got this sort of nested hierarchy or nested wholarchy, I guess, would be perhaps more accurate. It's the crises that are now global that no nation, no corporation, no individual can solve. It's literally forcing us to cooperate at a scale that we just haven't and with an urgency.

I mean one of the things that influenced me a few years ago—I read Paul Gilding's book—actually, just a year and a half ago—*The Great Disruption*. I interviewed him as part of this series as well. He thinks that we are about to experience mostly likely before 2018 he thinks

sort of the dam of denial breaking where the pressure builds and builds and builds, and when the dam breaks, the floodwaters are unstoppable. He thinks that we're not far from that within the next few years where the entire world—China, India, Brazil, the United Nations—I mean the United States, the European Union, everybody will be mobilized like we were at the beginning of World War II because we will see that our very survival is at stake.

Elisabet: You know it's interesting. I just came from the Boom Festival in Portugal.

Michael: The Boom Festival?

Elisabet: You know Burning Man in the U.S. A lot of people know about that. That one looks like a big parking lot from the sky. This one didn't have any SUVs at it because 152 countries sent their backpackers to come together. They had to stop the numbers at 42,000. It's very focused on sustainability.

Michael: Wow!

Elisabet: There were 280 composting toilets that had absolutely no smell in them and in very short order that human poop was heated up by sealing it and then worms were put in and straight into permaculture gardens.

Michael: That's great.

Elisabet: All the water from over 100 restaurants that had applied to come and be food concessions, going through reed beds where it came out clean on the other end. At dusk, the whole place lit up magically with all of the solar collectors on all of the sculptures and wonderful huge artistic buildings and things.

I said to them—I actually met the founders and organizers. This was the 10th time they had done it. I said, "Boy, are your skills going to come in handy in a few years when 13 of the largest 20 cities of the world all flood at once, not centimeter by centimeter as scientists would like to have it, but in jumps of a couple meters at a time," as Jim Hansen will tell you when you get to do the interview with him. Then what? When 13 of the biggest cities on the globe have their piers and airports wiped out, let's say all within a week of each other, think of the massive millions of refugees that are going to have to go into areas with no resources and feed themselves and take care of themselves.

Yes, we're facing that level of disaster as human beings, that level of disaster. Everybody that's working on local sustainability now is on exactly the right track. I do work with very high-level corporate people and I say to them, "I don't want to see you left behind because you have the trim tab capacity to turn things around quickly that ordinary people can't do quite as fast as you could if you all got into this together and all worked together on our survivability."

You see it coming and you know that we're spirit having a human experience here, and that those of us who are here now, I believe, are volunteers who came intentionally. I don't know if I'm going to be around for a lot more of this because I'm looking forward to graduation, but it is going to be that way. We need all the optimistic people who can learn from our past that growing up is perfectly natural to do, just as natural to do as a species as it is for our bodies to expand up to adolescence and then to level off and be a community of 100 trillion cells, each as complex as a large human city, and all getting along beautifully gung ho.

Michael: Yeah, yeah. Oh, amen! One of the things that I've always appreciated about you, Elisabet, is that, in fact, you, Bob Keck, the late Bob Keck and Duane Elgin have been three people that have been sort of older brothers and sisters on the path for me especially around this maturing metaphor, this understanding of maturation and also just your consistent taking the big picture, taking a deep time perspective and saying, "What are the lessons that we can learn from our story, our great story, the epic of evolution, big history, whatever you want to call it? But what lessons can we learn that can inspire us to be in action in ways that future generations will be grateful for rather than judging us for the self-centeredness of so much of 20th century living? This living beyond our means, living with a sense that the planet doesn't have ecological constraints, not attending to what is our impact on the air, the water, the soil, and the life of this world so that future generations can also not just survive, but thrive. You've been one of my most cherished older sisters in this work, and I just deeply appreciate you for that.

Now one of the things I want to come back to is something that you touched on just briefly, but that I want you to elaborate on a little bit more, which is the symposia that you've done where you take a look at the ways that science has been thought of and the way that science has been done in different cultures. That there's not just one monolithic science, but there are a multiplicity of ways of doing science that obviously have helped us understand the nature of reality, but also understand not just what's so or how things are, but also which things matter, what's important, and how to live in right relationship to reality. Say a little bit more about sort of these symposia that you've done and what you've learned in that process.

Elisabet: yeah, so humanity, if you see it as a oneness, as one big family, as all of us reflecting each other and stuff, and you cherish the uniqueness of every single individual just as every point in a physical universe is a unique perspective on the whole, so every human is a unique perspective on reality.

For one culture to say, "Science is the way to really understand reality, but our cultural story must be at the heart of that science," that doesn't fly anymore. If the religions can get together and have world parliaments of religion and respect each other as Vivekananda said at the very first parliament of religion said, "It's necessary for every religion to recognize that all are paths to the same end." All our paths to God, whatever you want to call your living cosmos' name.

It was very interesting to me to switch from being a paradigm shifter knowing that many of us scientists who were trained in the non-living universe that you see objectively and that generates consciousness, that we all kind of gravitated to the Vedic assumptions, a science far older than western science, that had started by studying consciousness, the mind from within and how the mind creates the physical world.

Its fundamental assumption is diametrically opposite to western science. Consciousness was a late emergent product of a physical universe on the western science side. No, the whole physical universe emerged from consciousness on the eastern side.

Now are we to say, "Those people were all wrong?" Or can we say, "They were fellow human beings who also had their sages and their mystics and their scientists and all, and they're entitled. Let's see what happens when you build a science on those assumptions and make the theories and do the tests."

Then, as I said, Islamic science has a living universe that really wants to look at the biological world to see how things work. There's no reason why we can't have a global consortium of sciences, but this is really tough because western science is more dogmatic than the most dogmatic religion or it's identical to the most dogmatic religion that says, "My way or the highway."

I wish I could convert more people to understand the importance in a globalized world where we have to respect each other. If we're going to be a human family, we need to respect each other's ideas and to value different perspectives on the universe and reality. That's just so supremely important to me. I did want to say one other thing that should give everyone hope.

The biological world is politically unassailable. The fact that you're running around in a body that's a cooperative of 100 trillion cells in which no organ would try to make the other organs like it, that's that total respect for the diversity of every cell. Your body would never want all the cells to be producing the same hormone. There is no monoculture in you, and there shouldn't be in the world. There shouldn't be in the world of science and there shouldn't be in our politics or anywhere else.

Clearly what we've been calling democracy isn't working at all because it's such a divide-and-conquer mechanism if you're going to have two parties and there's somebody behind the scenes who can manipulate them into fighting with each other over trivia so that you can run the world your way. My current hero, by the way, is Robert David Steele. I hope you will interview him and his book on *The Open Source: Everything Manifesto*. Here it is. It's right beside my computer. That wasn't intentional. I was just looking at it this morning, not intentional for this interview.

But here we are with an ex-CIA agent who trained some 65,000 other agents and co-created the U.S. Marine Intelligence Service, who comes out and says, "Everything is secretive in this world. All of the secret information we're spending huge amounts of money to gather. It's completely worthless." Just the information sent to Obama costs \$80 million or billion or something dollars a year to produce and he doesn't even have time to look at it.

This little secret world completely ignores the world that's available to everyone. It's disconnected and everyone in it is lying to each other anyway, so the information is useless and very expensive. He's using this wonderful language of looting the commons. I really like that.

Michael: Oh, I like that too.

Elisabet: That the 99% commons have been looted by the 1% so that the Earth is not fairly available to all of us, and the privatization of our water—the next thing we'll have to buy our air. I'm living in a village where every day a stream of trucks is selling us water while we're pumping it out of a water factory, and the other set of trucks is taking it away from us. That's a market economy. That is not an economy set up for people to meet people's needs.

Robert David Steele is saying—he's got three main points that we need to have open source everything means complete transparency. Every man, woman, and child on the planet should have access to every piece of knowledge humans generate and access to any kind of technology, completely transparent government. No lies. No deception. The way your cells—if your cells deceived each other, you wouldn't work very well. They all know what each other do. They know their part. They know their diversity is—their uniqueness is respected and the whole thing works because there is a deep consciousness in your body.

Then true cost economy, if you really knew what—Steele uses the example of a white t-shirt. Everything from child labor to chemicals to whatever goes into that. None of that being accounted for in our economies and to have holistic analyses of everything going on on the planet, and then figure out how do we really govern ourselves in equitable ways that benefit everyone?

Michael: Yeah.

Elisabet: It's just our turn to grow up as a species. We all are walking around in this supremely wonderful model of biology. We have to just get out there and say, "Hey, the emperor has no clothes and we're not going to let him get away with this anymore."

Michael: No, no. John Stewart, the Australian, not the comedian, of course, his work on *Evolution's Arrow*, the necessity of aligning self-interest at multiple levels, as I think that vision of...

Elisabet: That's in my *Earth Dance* book, too.

Michael: Yes, yes, exactly.

Elisabet: That self-interest is not selfishness.

Michael: Right, exactly, exactly.

Elisabet: That self-interest must be negotiated across levels, and your cells do it. They have to negotiate self-interest with the organs and with the organ systems, with the whole body. In order for all of it to be healthy, there must be these negotiations.

Michael: Yes. Yeah, I remember first thinking about diversity in consciousness and politics and religion and all that sort of thing using a body metaphor. Again, this may be one of those things that you were my first influence on that, but I sometimes say I would not want my anal sphincter cells and my heart cells to be doing the same thing. I mean the fact that they have different roles in the body is a really good thing.

Elisabet: That's a good one. I don't remember that one, but it certainly is an interesting image.

Michael: Elisabet, there's a fun question that Connie has requested. My wife has requested that I ask all of my guests and I think I've only forgotten to ask once or twice. That is if you could have dinner, either a dinner party where there are three people from any time in human history and yourself and all four of you are having a conversation or one-on-one with any three people over a meal or a glass of wine or a cup of coffee or whatever, but if you could have a one-on-one experience or a dinner experience with any three people throughout human history, who would those three people be and why would you choose them?

Elisabet: Yeah, well, that obviously would take a little thought, but the first person who comes to my mind is Giordano Bruno.

Michael: Oh, yes!

Elisabet: Because Giordano Bruno understood an omniscient universe. Even though they still hadn't figured out that Earth wasn't the center of things and had to go to the sun center, and then later to the omniscient, Bruno already had it. Of course, he was burned at the stake for ideas

of that kind. I'd like to have him at the dinner party to make him the most honored guest for having figured that out.

I think Hypatia may have come close to that same kind of understanding, so I think I'll bring her out of Alexandria. I've got one from Italy and one from Egypt. I just can't get away from the middle sea somehow. Wow! Who else? Probably some magnificent Indian elder who's not around any longer.

Michael: Yeah, amen.

Elisabet: I don't know whether that—that one, I guess, would have to be a grandma since I've got—no, I had a man and a woman at the table and there's me, so it can be a male Indian elder, just so that we can maintain the gender balance.

Michael: Amen, amen. That's great.

Elisabet: And also because Indian elders always have a sense of humor. Since Hypatia and Bruno didn't end up all that well, both of them having been murdered for their ideas, we're going to have to have a little light-heartedness at the dinner table.

Michael: Yeah. Well, beginning to wind down. I just want to sort of ask when you speak to people and when you do the work that you do, you've already touched on some of these, but what inspires you in the face of some really scary stuff? How do you stay inspired to be an action, to be participating in what my mentor, Thomas Berry, called the "great work?" What inspires you and gives you hope on a day-by-day basis in the face of really scary stuff?

Elisabet: I think what continues to keep me in some kind of equanimity about it all is knowing that I'm spirit having a human experience and that I am already immortal because linear time is very real in a physical world, but beyond the physical world, it's just always now. Everything is packed into that now, past, present, and future.

But I also believe that we have free will. We make the choices that create the pattern of that great eternal now. We are contributors to it. We are co-creators of it. All within God or super consciousness or whatever you call it, HP, Higher Power.

I'm optimistic because I know that on the one hand I'm in this physical world as an actor, and on another level, I'm an observer of this whole thing knowing it's a game we're playing, knowing it's a game in a loving universe that—I like to say maybe a bunch of angels who were sitting around on a cloud over 500 years ago saying, "What do we play next?" One of them says, "I've got a good game. Let's play conquistadors and Indians. Let's half of us be conquistadors and half of us be Indians and we'll do real shit to each other and see how long it takes us to love each other again." That's the game. How long does it take for us to love each

other again? How long does it take before we can plow through the veils of our physical world and get that we've got the most amazing planet that it's a piece of cake to make it heaven on earth for all humans as well as all creatures?

That's what gives me hope and optimism. I have 4 billion years of biological evolution behind me saying, "Things grow up. Things grow up." They either blow themselves up or die of their predations, choke themselves off or they grow up. I think humanity is a wonderful little biological investment on the part of God or future or universe, whatever you call it. I choose to believe in a reality in which we do grow up, in which we do get it, and I hope it happens real fast, then.

Michael: Yeah, amen. Well, that's a wonderful note to conclude on. I obviously find you as a soul sister in this work of taking our best science or best sciences to help us live in right relationship to nature, Gaia, Earth, this reality that we call—that I call God, that also can be called many things, but this living, creative, sacred reality in which we live and move and have our being and doing whatever we can to help ensure a healthy future for not just humanity, but the larger body of life of which we're a part.

I'm delighted to have this conversation. It's been a while since we've connected and so I'm just thrilled. If people want to go more deeply into your work, where would you most recommend, where would you suggest that they go?

Elisabet: Well, my website is sahtouris.com. S-a-h-t-o-u-r-i-s.com. A lot of my work there is free. There are some video links and stuff. You can Google me on YouTube and find all sorts of stuff. My books *EarthDance*, with a capital D in the middle of *EarthDance* as a single word. *A Walk Through Time* and *Biology Revisioned*. Right now, *Kosmos* magazine has my "Ecosophy" article on it as a lead-in article. That's available online as well. Anyway, just look.

Michael: Pretty soon she'll have the book that we were talking about at the beginning of this.

Elisabet: *Gaia's Dance*. Oh, and I've got about three-quarters of a draft written for the next book, which may be called *Vista* or *Vistas*, with Betty Sue Flowers as a partner editor.

Michael: Oh, that's great! She's wonderful.

Elisabet: Hoping to do films and things like that, too. So anyway, it's always a pleasure to talk to you, Michael. I love what you're doing and Connie as well. You're a great team and you've converted a lot of people. You're good missionaries for Earth!

Michael: Thanks! Elisabet, blessings on your work and your life and your health.

Elisabet: Same back to you.

Michael: I look forward to actually giving you a big hug the next time we see each other in person.

Elisabet: Okay.

Michael: Yes, cyber hug. Right, exactly!

Elisabet: Great!

Michael: Okay, bye-bye.

Elisabet: Thanks. Bye.