Mind & Life Podcast Transcript
Karen O'Brien – Why We Matter

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Opening Quote – Karen O'Brien (00:04): *Are we underestimating our collective capacity for social change by being in a paradigm where we see ourselves as very atomistic, deterministic, individualistic? When we recognize that we live in a quantum world, everything changes. Our inherent co-relationships are intrinsic to our being in this world, and it's very easy to forget that from a classical perspective, where we see me versus you, us/other, humans/nature. We don't see that the individual is the collective. We are the systems. And when enough of us actually really catch on to that and get it, then when part of the system changes, the whole system changes.*

Intro – Wendy Hasenkamp (00:45): Welcome to Mind & Life. I'm Wendy Hasenkamp. Today I am speaking with professor, author, and thought leader Karen O'Brien. Karen is an internationally recognized expert on the human and social dimensions of climate change. Her work helps us understand the role of the mind in how we both create and respond to environmental change and global change more broadly. Karen is based in Norway at the University of Oslo, and she served for many years on the Intergovernmental Panel on Climate Change, better known as the IPCC. And in 2007, she shared in the Nobel Peace Prize for that work.

(01:27) I was really excited to speak with Karen because her perspective goes deep into the realm of interconnectedness. Recently, she's been drawing on concepts from quantum physics to think about how societies can transform—something she refers to as quantum social change. And I love that she's also particularly interested in the role of beliefs, values, and worldview, which of course are all based in our minds. We dive into all of this more on the show, including ideas like entanglement, worldviews based on separation that we've inherited from the Enlightenment period, and questioning our assumptions about how causality works. We also talk about Indigenous wisdom and interconnected views of nature, wrestling with eco-anxiety, and the role that meditation can play in helping us embody transformative change.

(02:22) For me, the big take home from Karen's work is that each of us really matters in our world, because we're each in part creating it. There's a lot of inspiration in this episode. As always, you can find much more on Karen's work in the show notes. I hope this conversation gives you a different lens on the role you can play in transforming our collective future. With that, I'm very happy to share with you Karen O'Brien.

Wendy Hasenkamp (02:53): It is such a pleasure to welcome Karen O'Brien today. Thanks so much for being here, Karen. Welcome to the show.

Karen O'Brien (03:00): Thanks for inviting me Wendy. Nice to meet you.

Wendy Hasenkamp (03:02): Yeah, likewise. Well, I always like to start before we get into the nitty-gritty of people's work with a little background from guests, their interests and how they got into the work that they do. So I love the lenses that you bring together. You've been in the space of climate change for so long, but you also bring this lens of sociology and how humans are responding to these environmental changes. And more recently, you've been weaving in ideas from quantum physics, which I think is fascinating. So I'm just wondering how all those realms came together for you.

Karen O'Brien (03:34): Yeah. It goes back quite a ways. I really wanted to be a diplomat. I was really interested in world peace growing up during the Cold War. And I was waiting to go into the foreign service and was waiting for security clearance and worked at National Geographic, The National Geographic Society in Washington. And there I was really exposed to tropical forests, and nature, and heard lectures by Jane Goodall and Richard Leakey, and it really woke up something in me. It was like wow, the environment. And I started to think about that as a second career, but then I started to be more excited about that than my first career and decided to just enroll in a Master's program in environmental studies because I hadn't taken any science. And I really fell in love with the science of it—climatology, ecology, meteorology, but also geography. And one thing led to another... It was 1988 when James Hansen went on record to say climate change is real and we're loading the dice. And so I started working on what climate change means for Mexico, looking at the general circulation models and what does it mean for food security. And that led me into looking at the relationship between deforestation and climate change.

(04:46) So I was very much interested in these very interdisciplinary, big picture perspectives. But always coming from a background of social sciences. And so starting with, what are the social and human dimensions of these issues? But still, I had to really get the foundations in the physical sciences as well. So one thing led to another, and I think that... kind of leaving no stone unturned, because once you understand what it means for us as a species, as societies, it's pretty profound.

Wendy Hasenkamp (05:16): Yeah. And then what drew you to quantum physics and those ideas? How did that come in?

Karen O'Brien (05:24): I think I was just fascinated by the... I had read Danah Zohar's *The Quantum Self* and *The Quantum Society,* a friend had lent them to me. And I just thought it was interesting. And I think I got *The Tao of Physics* from a boyfriend once. So I had these on my bookshelf. And it wasn't until I came across a political scientist, Alexander Wendt, who was starting to challenge, looking at quantum social science. And then I made the connection and really thought, what does this mean for climate change? And opening up that inquery, I was like, well, how are we actually seeing ourselves in relation to the world? What are the assumptions we've been organizing ourselves and our societies on, in Western societies?

(06:05) So it really opened up a lot of question marks for me. And then I just started to read it and I started to see that it's very much aligned with many Indigenous knowledge systems and wisdom traditions. And it just has fascinated me and really led to this question of, are we underestimating our collective capacity for social change by being in a paradigm where we see ourselves as very atomistic, deterministic, individualistic, et cetera? And so it's been a really fun journey and it keeps raising questions, but I think the science itself is really catching up with it.

Wendy Hasenkamp (06:39): Yeah, that's awesome. Well, let's dig into... You were already pointing to these assumptions and the worldviews that we hold, and the way that shapes our responses and how we act in the world. And I appreciate in your latest book, You Matter More Than You Think, you start out with these assumptions and ideas that we have inherited and we've been holding for several centuries now, going back to the Enlightenment. So I wonder if you could share just a little bit about... Because ideas like that, that are so large and pervasive are easy to miss because they're just part of, as we call them, assumptions. So we don't really critically think about them a lot. But maybe you could just lay out some of those foundational concepts that arose at that time.

Karen O'Brien (07:27): Yeah. And it really traces back to the Newtonian view of physics and Cartesian, where mind and body are separate and subjects and objects, that we can actually look at the world out there as separate from ourselves. And so it really was the basis for science, which has been really important to look at a very objective view. But what we know now is that there is no objective view, that we are always influencing the systems that we are part of. So this reducing everything down to the very smallest part—at one time that was atoms and we keep going... I guess quantum physics more than a hundred years ago really started to shake up that world that we are just these, what have been referred to as the "billiard ball" universe. We're just these things that with causality, that this leads to this, leads to this. And then starting to see that, wait a minute, we are made up of energy and the subatomic particles are entangled. And that's where we start to realize that reality is not what it seems.

(08:25) And so for the last a hundred years, quantum physics has been very valuable in developing all these technologies from lasers and computer chips and everything. But what's I think interesting now is to really see how the paradigms, the thought patterns that we have also influence how we think of ourselves in relation to each other, and how we organize our societies. So for me, the Cartesian, Newtonian classical physics giving way to quantum physics, we haven't really adapted that to our understanding of social change. And that I think opens up a different lens to say that... And when I say "you matter more than you think," it's not just matter as a substance, but it's also in that significance. And literally the process of mattering is something that we're doing in every moment. And to me, it gives us that agency and a role for free will, a role for us to actually influence the systems that we're part of, rather than just feeling in the case of climate change, that it's all very determined already and there's nothing we can do, and I don't matter. You don't matter.

Wendy Hasenkamp (09:34): Right, yeah. There's so much there. I'd love to just pause a moment and unpack a little bit of the ideas that you are drawing from quantum physics, because I think they're kind of hard to get your head around. *[laughter]* Maybe because we're all so steeped in these classical approaches of everything is separate. And like you said, quantum physics really shakes that up. So could you describe a little bit of what is meant by entanglement, for example, or some of the other concepts that you draw on?

Karen O'Brien (10:05): Yeah. Entanglement is, it's a word we use in our everyday life to mean intertwined. But in quantum physics, it is really about a relationship where two particles are correlated—or co-related—with each other in an acausal way. And Einstein called it spooky action at a distance because when you measure one, you get information about the other. But really, it's not action at a distance, it's just that you get the information. So this idea of entanglement that the entire universe is entangled at this subatomic level, but also science is saying that larger and larger particles are shown to be entangled, [up to] small molecules. And what we also know is that we can be entangled in the social science perspective—through language, through meaning making, through shared context. So a few years ago, three physicists received the Nobel Prize for their work on entanglement. So entanglement really is the

basis for everything, and it's more trying to understand why we're not... You know, the messiness of the macro world, and how that emerges from a quantum world.

(11:10) So I love Donna Zohara's quote that "when we recognize that we live in a quantum world, everything changes." It's paraphrased, but it really is to think about that we are so... Our inherent correlation or co-relationships are intrinsic to our being in this world. And it's very easy to forget that from a classical perspective, where we see me versus you, us/other, humans/nature, subject/object and things. We create that distance between ourselves rather than seeing that, how are we all one? And that oneness, I think, is the beautiful part of quantum social science, quantum social change—to recognize that we have to really be thinking of the whole. And that really brings us down to, when we're talking about climate change and biodiversity loss, that we can't treat the world as if it's just a bunch of unrelated parts anymore.

Wendy Hasenkamp (12:09): Yeah. I love that. And you said something that I think is really key. I was talking recently with Otto Scharmer, are you familiar with-

Karen O'Brien (12:18): Yes. Yeah, very familiar with him.

Wendy Hasenkamp (12:19): He was sharing how the biggest issue that we're facing right now is not climate change or any of these other crises, but the fact that we don't feel that we have agency to affect them. And I think you were just pointing to that too. Especially in the space of climate change, it's quite easy I think, to feel discouraged and feel that the path is out there and we've missed our window, and these changes are just going to be happening. So maybe you can share a bit about how this lens can help us understand more about the impact that we can still have.

Karen O'Brien (12:57): Yeah. I think just to start with, it's ironic that when we're talking about climate change, we're talking about every little individual thing that we do—our energy use, our land use, and everything affecting the system, the climate system. And yet we don't necessarily see that all the positive things we do as individuals also influence the whole system. So there's kind of a glitch there, that we tend to underestimate our potential for systems change, changing economic systems, social systems, et cetera. And the idea with quantum social change is that our actions are always influencing the whole system. Whether it's like ripples, waves, resonance, that we are a part of this whole. So what I do, it doesn't have to be causal to be influencing the entire system, but that we're creating these fractals of change, these patterns of change that resonate across different scales.

(13:52) So it moves us away from this global to local, and top-down to bottom-up. And instead it starts to see, wow, we all have this possibility in whatever our sphere of influence may be to be setting up a new pattern and establishing that. And when it's based on values that apply to the whole... And this is where the normative dimension comes in. Because it's not a neutral process, but what we care about, whether it's equity, dignity, compassion, things that apply to everything, all life on earth, then you start to see these more coherent patterns emerging. And I think that that is where, again, people don't actually see that what they're doing is actually making a difference. And that is where, when I say that you matter more than you think, it's not just what we think, but it's how we show up. How are we connected to ourselves, to each other, to nature to the future?

(14:48) And it gives us a lot more leverage when we realize... Because often we have this very mechanistic idea of leverage points, that we need to really leverage the system. But we are the leverage points. We have this capacity to actually shift systems and cultures at larger scales. And when we realize that, I think we realize that it's not just up to me alone. That's a very classical view of "me against the world," but it's

like we ... And Dan Siegel and his work on IntraConnected talks about MWe, and I just bracket the I and the we because we don't see that the individual is the collective. We are the systems, and we are nature. And how we show up actually is making a difference. And when you think about, when enough of us actually really catch on to that and get it, then it goes into that self-awareness of when part of the system changes, the whole system changes.

Wendy Hasenkamp (15:45): Yeah. You're just saying about how individual change is systems change, I guess is what I'm hearing come through. And I feel like that, there's a lot of discourse I think today, in contemplative science, for example, and in many spaces, about the need to move from thinking about individual change to systems change or larger structural kinds of changes that we need to make. But still, I think there's a dichotomy there. So I think we think, oh, there's individual change and then there's this different thing that is systems change that we need to be working on. But am I understanding you right? I feel like you're pushing against that a little bit, and saying that those are actually either interrelated or maybe even the same thing. Can you talk a little more about that?

Karen O'Brien (16:31): Yeah. Well, I think that it's not just individual change, but I am part of the system. I can be an alibi for the status quo. We're always part of a larger whole. If we think of ourselves in the classical systems, then we're separate and bumping into each other. We are having force on the systems. But from a quantum perspective, we are the systems—and yet power and politics still come into it. And you start to see that we have organized society, we have given power to certain people, and that is where then those power relationships cannot be ignored. And as individuals, how do we actually show up and shift the systems and cultures towards things that support the whole? And that would mean really looking at, what are the climate policies? What are our conservation policies? How are we organizing ourselves so that we actually create options for future generations?

(17:25) So it involves a lot of reflexivity. It involves a lot of critical thinking about, okay, if I am part of this system, how can I contribute to shifting it? And I think when we talk about systems, sometimes it's so abstract and so large, but we're all part of so many systems. A family is a system, a community is a system, a church group is a system, a football team. How can I actually influence these different systems in a consistent way, based on the values that I care about, not just for myself but for everyone? And so it gives us then that room to really think about where... You know, we just think, oh, just my little community, my little country, oh little Norway or whatever, that we actually can start patterning the world in different ways. And to me, that gives a lot of power and potential. The potentiality is really there, but often we have to get out of our own way to realize that. And that means getting rid of some of the thought patterns that we've been raised with of us and other and that's not easy. Especially in times where we're moving towards fragmentation and polarization, and the narrative is more divisive than unifying.

(18:30) – *musical interlude* –

Wendy Hasenkamp (18:56): I'm wondering if maybe... We have been speaking a bit in the abstract, and I wonder if it would be helpful to ground out some of these ideas for listeners. Do you have examples of a change that maybe you've made, or people in your sphere, that has these kind of ripple effects? I'm aware that I'm still trying to trace causality in a linear way, and maybe that's a problem as well. But anyway, anything you could share to flesh out examples of what you mean.

Karen O'Brien (19:27): Yeah. I could give a few examples, because I think people want to grasp, what does this look like in practice? That was a lot of the questions I got asked about the book. What does this mean in practice? And I think what I really came up with is: practice matters. It is how we show up in those moments. And so, if I decide to eat a plant-based diet, that's a personal decision I have, but it influences

my family, it influences my friends, it influences the stores and the chains and things. And we start to see that we are not just alone, but there are other people who are also doing this. So we're part of this movement towards this. And I could say, "Oh, well, it's just little me and I don't make any difference." But it's also then my daughter following (she's influenced me as well), and my son and others and their friends. And it's not to say then that we're changing others and things, but you're part of a larger movement towards recognizing that... Going into then supporting regenerative agriculture and permaculture and other ways of organizing our food systems. But we're never going to get there if we don't actually change the way that we relate to the food that we eat, and our bodies and ourselves. So I think it's trying to really see ourselves as part of this bigger picture of these things.

(20:45) I was recently, for the last three years, co-chair of the IPBES—the biodiversity panel of the United Nations, their transformative change assessment. And we are looking at what the literature tells us about transformative change for a just and sustainable world to meet the 2050 vision for biodiversity. And we had about 391 case studies from around the world, and you could really see how these communities are showing up differently, how they're creating these different patterns. The Nashulai Maasai Conservancy, for example, is one that I'm very familiar with, where Nashulai means coexistence in the Maasai language. And they took down the fences. They started educating girls. They started to do things very differently, and the wildlife came back in less than 10 years. They were able to feed thousands of people during COVID. And their model is being copied in other places—not replicated, but people are looking at it for inspiration. So they're having these different effects, and there's other groups around the world that are doing very similar things. They're connecting themselves to land, to each other, and they're basing it in these values.

(21:53) And then you also see where the classical systems come in, whether it's finance, whether it's the power dynamics between older models of conservation, et cetera. So we're always embedded in these very powerful classical systems. And to me, it's really interesting—how do we shift those large scale systems? And what we see now is many of them are crumbling in and of themselves. So how do we actually keep the patterns so that the new modes of being, and new modes of organizing can emerge? So it's really to get to this... being able to live in a "both and" world to say that yes, we are in a world where ice melts at certain temperatures, where species die if the ocean is too acidic or they do not have food and things, and also then be able to really connect at a much deeper level and think about how do we collectively and coherently work towards social change?

Wendy Hasenkamp (22:48): Yeah. There's a piece for me, and sometimes we get down this road on the show with different guests, but I've actually been thinking a lot about causality lately, and assumptions about causality. I suppose being embedded in these classical and reductionist views have tended to shape our minds to look for a single cause for things, which is never the case. And because of complexity and entanglement and interconnectedness, not only it seems that there are always multiple causes, but it's almost everything is causing everything... So anyway, that doesn't necessarily make sense, but I wonder if you could share how you think about causality in light of these views.

Karen O'Brien (23:35): Yeah. Because causality, there are things that we know, that some things have more impact on other things. So it's not to then question whether burning fossil fuels is creating climate change because we actually know there's a lot of evidence there. But then it goes into that subtle realm of what we do and how we show up, and our intentions, and the clarity of our beliefs. One of the interpretations of quantum physics is called QBism, or Quantum Bayesianism is the long name for it. And it's really about how our beliefs influence... they're like bets on the future. And if we think about ourselves as, oh, a two degree world is not possible, we're going to be going to a three degree Celsius warmer world or a four degree Celsius warmer world or something like that, then we tend to... That's the bets that we're

placing on the future, and we're not seeing all the solutions that exist right in front of us. And to me, to be very aware and clear about what we believe is possible and to work very intentionally.

(24:38) And I think that really it brings us to why consciousness matters. What is in our awareness? How do we actually show up, and what resonance are we creating in the world? And often we're going against others. We're pushing against things in a very classical way. And what we get then is a lot of pushback. We don't create the momentum that we need for social change. And people always point out that for social change, it doesn't take 50% or 99%. That a very small group can make a big change. And that's often because it creates a momentum, it creates these attractor fields or however you want to call it, in complexity science. And again, when we underestimate ourselves, we don't see that we're moving forward. And rather than just waiting for another paradigm to come, we have to actually occupy the paradigm. We have to be part of the change that we want to see. And that goes back to the "be the change you want to see in the world," et cetera. But it really then does come down to that. And then again, going back to, what does this mean in practice? It really means practice matters. And that's where mindfulness and being just aware of how we're showing up and how we're responding to some of these many crises that are going on right now, the poly-crisis, the mega crisis, however we want to name it.

Wendy Hasenkamp (26:00): Yeah. I was just about to go into the contemplative space. And I'm wondering in your work or personally in your life, if that sphere has overlapped with your work. You mentioned mindfulness, but yeah, it strikes me that working intentionally with our mental patterns could obviously be a really helpful piece of this to push us in shifting our worldviews in these ways.

Karen O'Brien (26:25): Yeah. I love Vipassana meditation and so I've done a number of retreats. And it really has helped me to actually experience the abstractions that I talk about, that I'm fascinated about reading about and everything, but really to how do we embody it? How do I embody it in my day-to-day living? How can I be equanimous when I'm facing stresses? And that goes into then, to be in practice so that I can show up, be more resilient in times. And it's not easy, especially nowadays for people working in the sphere of environment, climate, social change. It is very challenging right now. So to be grounded, and to be grounded in our values, and that's where I think that to actually embody transformative change rather than to talk about it becomes the real challenge for us. But I think that is where the answer lies also is, how do we actually meet the moment?

Wendy Hasenkamp (27:23): Yeah. Do you have any examples to share in your own life, how practicing in these ways may have helped you learn how to embody these ideas better?

Karen O'Brien (27:33): Well, I think that meditation just reminds me in the moment to be aware of my breath, my breathing. But I think I'm attracted to all different types of meditation also, and to all of these different things. I run these transformational leadership for sustainability courses, and there's so many different ways, different modes. Whether it's yoga, whether it's Vipassana. There's just so many different ways of actually connecting to ourselves, connecting to breathing, connecting to nature. And I think that it's almost like a smorgasbord of options that we can have. You could do Tai Chi, Chi Gong, running, playing the piano. There's so many different ways of having that contemplative practices and embodying what we're talking about. And I think that it's been harder for me to commit to one, but I realize that Vipassana, it has had the most profound impact on me. I've just noticed that it's made a big difference in my own life in terms of what I can tolerate. But also, it makes me aware of when I need to step back, when it becomes too much. It's like, okay, I need more time. And I think maybe many people are feeling that right now, is that we actually need to create more space for ourselves to have that contemplative time, quiet time, walking in nature, meditating, just retreating so that we can move forward effectively.

Wendy Hasenkamp (29:05): Yeah. It can seem counterintuitive, but I think it is so necessary. I'd love to talk a little bit more about our relationship to nature and how, I suppose from the classical perspective or ideas that we've inherited, we see ourselves as something separate. And you mentioned various traditions, wisdom traditions and cultures that have really different views. Could you share a little bit about some of those that you've experienced? Other views from what we might be used to?

Karen O'Brien (29:33): Yeah. And I think that we're used to nature as being something separate from us, something that we can use. It's a resource for us. And that goes very much back to biblical times and that we steward nature. But rather than seeing... Some people see nature as just having intrinsic values in and of itself, regardless of humans. But then there's also the view of that we are nature—that we are connected with the trees, with the air, with the water, with algae, fungi, bacteria, everything. And to me, once you recognize that and say, "Wow. It's not just out there, it's not just something that is valuable there, but we are nature." And in every sense of the word now. We're seeing that our bodies are made up of plastics now. They're made up of the air we breathe, they're made up of everything. So it's almost an exaggeration to say literally we are nature.

(30:25) But in Indigenous cultures, where rivers and trees, you can communicate and commune with them. And it's so far-fetched from our ideas and yet when you look at the research and you look at panpsychism, that consciousness is embedded and embodied in everything, and that animals have feelings... All of these things that just seem like Disney cartoon type of things. And you think, no, this is actually the way that most people have understood the world and we're really the anomaly that have taken nature and just decided that we can cut down the forests and trees and we can pollute the oceans, and that it's not affecting us. And we have so much to learn from Indigenous traditions and wisdom. Listening to what the elders are saying. It's almost that they're shouting it out: Learn from us.

(31:22) And I think for me, quantum physics is this bridge that is saying yes, the science itself is telling us to open our minds and listen, and pay attention to those relationships because otherwise our paradigm is killing us, literally. If you take the science seriously, then what it's telling us that we are in the decade that matters, and that we don't have a lot of time, then we need to ask different questions. We need to relate differently to each other and to nature. It's challenging us in every single way. But it's also then, can we step up to the challenge? Can we open our minds and ask questions rather than just dismiss everything as, "Hmm, that sounds weird" or whatever? And that I think is the power of contemplation, the power of listening, the power of just going out there and experiencing nature rather than watching it.

Wendy Hasenkamp (32:20): Yeah. And you've said that climate change is fundamentally a relationship problem. Can you unpack that?

Karen O'Brien (32:29): Yeah. Because I think we've framed carbon dioxide as the problem, and it's an emissions problem, and then it's about us and our human activities. But really at the deepest level, it is about how we relate to ourselves and to each other, and to nature and to systems and the future. And when we start to address it as a relationship problem at that very deep level, we'll be addressing so many other problems as well. Because you wouldn't let 900 million people go to bed hungry at night if you're actually in relation to them, rather than othering them. And so building it into a relationship problem, it starts to be that like, wow, when I change, the relationship changes. And so that it gives us this power to actually influence many of these relationships—how I treat my children, how I treat trees, how I treat food, how I treat air, et cetera. It starts to see that we have so much room for shifting these relationships. I think it's a lot more empowering than to be focusing on how do I reduce my carbon footprint. Which is of course important, but it is at that very deepest relationship level.

(33:40) I always think that in the future we're going to be looking at ourselves and we're just going to think about, wow, why did we burn fossil fuels? Why did we burn hydrocarbons? They're so valuable, in terms of the molecules that they are. They could be used for plasmas. There'll be a thousand other uses for them in the future, but right now we're just burning it to go from one place to another. I think we're just missing so much in our very fixed way of seeing and being in the world. So to me, it's like once we open it up and look relationally at it... I think one of the more positive things is that we're seeing the relational turn over the last 10 years really emerging, and we're seeing Indigenous and local knowledge being taken seriously. So there is a lot of movement there, but it's just how do we accelerate that?

(34:28) *– musical interlude –*

Wendy Hasenkamp (34:28): I wonder if you come across... It feels like, I guess from my own experience, I have also been in this increasing trajectory of understanding relationality, and not feeling so separate from the world around me and nature. And I agree that that absolutely is the shift that we need to make mentally. But I think it can also come with a lot of pain, because I think when you start to really take seriously the experience of everything else on this planet and how we have been interacting with them and the suffering that we have been causing (or also just exists), I think it can start to be pretty uncomfortable, and potentially overwhelming. So I'm wondering if that's a piece of maybe what keeps us in this mode of pushing away. Like, oh, that's separate from me, that's not me. Because there's a lot of difficulty there when you actually start to deeply embrace the oneness or the relationality that does exist.

Karen O'Brien (36:05): Yeah. I think that's a really good point, and that is where I think the emotions come in. I see that in my teaching, with students really having to acknowledge that this is emotional, that there is grief involved, and that it's okay to feel that. For some reason, especially when it's about melting ice, I just get very teary. When you see what's happening in the Antarctic and the Arctic and everything. Just the profound implications of that—it really affects me, including when I'm talking about it with students. And it's just then, to acknowledge that and say, yes, this is where we're at. And to recognize then though, that rather than to go down into blame and not taking responsibility, to look at our ability to respond and to recognize that there's such a big difference between one and a half and two degrees Celsius. Every degree makes a difference. And that tiny changes are really important for some species and ecosystems and communities. And that we will look back and be remembered.

(37:09) So it is just to acknowledge the emotions and bring that in. I think that's been something that has also changed, because some years ago it was like you didn't acknowledge the emotions. But to really recognize that. And I think so many people are in that space right now to say, "Wow. We are losing things." Especially people working for decades on climate change, and you just see that, yes, we will be losing a lot. And yet we can still do so much better. And so that is really I think, where we're moving, into that. And going back to the quantum, the uncertainty—to be able to hold that space for the potential that doesn't feel like it exists right now, but again, to really think what is possible for us right now, and that it's not just about individuals, but it's about the collective. It's the individuals and collective working together. So it's a lot. And sometimes recognizing that when we have other things going on in our lives, it's harder to actually hold the big picture and to see our role in that. Especially if we have illness or other problems, our zone of disequilibria gets very narrow rather than widens. And that's where I think self-care—being able to take care of ourselves so that we can take care of the world—becomes really important.

Wendy Hasenkamp (38:29): Yeah. And also, it strikes me the role of community plays in importantly there as well. Does that come into your space too? I feel like that can be such a source of support.

Karen O'Brien (38:39): Yeah. It is the scaffolding that keeps us going, and I feel very fortunate to have been working with a fantastic community of people working on global environmental change. People who are so just committed and dedicated and working so... Yeah, it's just so touching to see how many people in the world really do care and how many people... I just think sometimes we don't recognize that, that there are millions and millions of people who do care, and who are working. And it's a little bit like they're out of the lens of the mainstream media. And I think if we think of them as all these different fractals of change that are coming together, that they will be visible soon. But we have to move the systems that are not working. They have to be shifted. And that's where it's easy to focus on what's going wrong in the world and not, what's going to take its place? And then who do we have to be?

(39:36) I think going back to the relationship with nature, it's not enough to just say, "Oh, I love nature," or go out in nature and things. But it's like, okay, how do I link that with how I show up in the work that I do? How do I connect it with the values that apply to nature, to other people, to future generations and so on? It really is to be able to be very solid and grounded in ourselves so that our coherence can be part of the coherence of everyone.

Wendy Hasenkamp (40:04): Yeah. Another thing that comes up I think in these conversations a lot is, as scientists, and we've talked about this certainly in the contemplative science space, but generally our lack of ability to assess systems change and as you've said, transformative change as a kind of change. So how does that show up for you? What assessments can we do? How can we know when we're shifting the needle?

Karen O'Brien (40:32): It's a great question. I was recently part of IPBES, the Intergovernmental Science Policy Panel for Biodiversity and Ecosystem Services. It's a long name. But they did a... The government's called for an assessment of transformative change. And so we spent three years really looking at the literature and thinking about, okay, how does it come about? What are the different methods? What are the barriers to transformative change? What are the strategies and actions that we need? And also what are the visions for the future? And I think importantly, we identified that focusing on the underlying causes of biodiversity loss in nature's decline is really important. And those underlying causes are exactly what we've been talking about: the disconnection from and domination over nature and people. But also the concentration of power and wealth, and the prioritization of the short-term individual and material gains. So all of these then—how do we actually overcome these underlying causes?

(41:29) And the principles of transformative change that were identified from the literature were very much about equity and justice, pluralism and inclusion, respectful and reciprocal human-nature relationships, and then also adaptive learning and action. So it's very much aligned with everything we've been talking about, and what I think of as, how do we engage with quantum social change when we ground in those values and when we recognize that there are really substantial challenges and barriers. But to overcome them, we're going to have to really show up differently and do things differently. And I think the governments have that as marching orders.

(42:04) And maybe what we are still needing is, what are the indicators of transformative change? What can we measure to show that we are so close? Because social change is a nonlinear process, and we might be so close to it, but we might not know that. So what are the early warning signs of it or the signals that we should be looking for in that? And I think that a lot of them are subtle and they're not measurable by science itself. And I think that goes back to the contemplative practices, and how do you measure the subtle things that are emerging?

Wendy Hasenkamp (42:42): Yeah. This is such an interesting space because I think you're right. I've had that on my mind for many, many years in the contemplative science space. And of course at Mind & Life, there's a lot of integrating of scientific tradition with these practices and their outcomes. And I have had the sense that the most transformative changes that can occur through meditation practice, we don't have measures for them. We can't reduce them. And maybe that speaks to what's been running through this conversation, the problems with the reductionistic approach. And it's almost like science and the way it has been built completely on these... you know, you have to be able to reduce something, manipulate a single variable, measure that. That doesn't necessarily align with the quantum reality that you've been describing. So it causes all these challenges for measurement and for science and for us to... Those are the ways that we know how to get a handle on something. So that's just really interesting. You were saying, we need the indicators for transformative change, and it seems like they'd probably be different for whatever system you're looking at. And there would be many. Anyway, that's just a really interesting challenge and tension there I think.

Karen O'Brien (43:59): Yeah. It is really paradoxical because you're trying to measure an acausal space—like a vibe, a resonance or something like that. And you can use, I guess the things from music. You can use proxies and different ways of... and then that's where I think metaphors come in. And when we talk about quantum social change, you could talk about the methods, how we can use the methods, how we can use the metaphors, how we can use the meanings. It's like, how do we take a different way of understanding the world and apply it to the world we live in a classical way? And I think for many, it's just very hard to grasp. But in some ways it's so obvious because the way we talk about things, the way we connect and feel about things—it's all part of transformative change. And that I think is something that becomes clear from looking at the literature, that there's so many different dimensions than just the leverage points.

Wendy Hasenkamp (44:56): Right. And that also makes me think of—I really appreciated in your latest book and in various other aspects of your work, you really put an emphasis on art as another lens maybe to approach these ideas. Do you want to say anything about how you think about the role of art?

Karen O'Brien (45:13): Yeah. I think art, it hits us in a very different way than the cognitive. And if we really want to address these issues, we have to really connect with people's hearts and their bodies. To me, it's just such a more beautiful way. And I've had many people who were reading the book in a class or groups or something, say, "I didn't understand what you were writing about, but the artwork spoke to me." And that I think is what we really need, is to be spoken to in different ways because we're never going to address these issues just as very cognitive, intellectual things. Because we already have all that data, but we don't have what's moving us. And sometimes it's art, it's music, it's movement. There's so many other things that can actually mobilize our agency and get us to really... Because basically we do need a whole body approach to social change. It can't just be our feet marching. And that's where artivism comes in. And where people are recognizing that it is, I guess, the idea of a different type of social movement. A "You Matter" movement wouldn't be the classical type of social movement, but it would be a very subtle type, where people really do get it, that what we do matters. And that is activating that sense of individual agency, collective agency, political agency. There's so much potential there.

(46:37) And there's nothing more dangerous to people who have power and want to maintain the status quo than a coherent group of people who are united and who are with a very clear vision, with very clear intentions for how we can be together in the world in a more equitable and sustainable way. But there is power in numbers. And when we start to think of it not just as numbers, but as a whole, then I see that the wave will come.

Wendy Hasenkamp (47:07): That's really inspiring. Well, I know we're coming close to wrapping up our time. I know you've also co-founded an organization called cChange. Is that how you pronounce it?

Karen O'Brien (47:17): Yeah, cChange. And it stands for conscious change, creative change, collaborative change, courageous... Yeah, it's very into the C's. *[laughter]* But climate change. So how transformation in a changing climate. I started it 10 years ago or so, really to take what we were studying and the academic versions of climate change and transformative change out to work with society. How do we bring this into practice in society? And so we're working with organizations, with schools, with municipalities to really engage people with, how do we move forward on sustainability? It's been very rewarding because it's really unleashing that potential in people and groups and organizations, and being able to go beyond, oh, just write papers, and think about this as: what does this mean in practice? And so at this point in time, it's really important that we start to work on scaling change in society rather than just writing about it and thinking about it and talking about it. And so, how do we create a fractal approach to scaling transformations to sustainability? And just the importance of really working with society for social change now.

Wendy Hasenkamp (48:35): Well, Karen, this has been so wonderful. I really want to thank you for all of your work in this space, for pushing these ideas forward, and for taking the time to share all this with us today. Are there any big picture take homes or anything that we didn't chat about that you wanted to share?

Karen O'Brien (48:52): No. I think that just really to emphasize all the potential that exists right now for engaging with social change in a different way. And that goes into the Mind & Life Institute's ideas of contemplation, and really going deeper and broader, so that it's not just seen as an environmental problem. Or climate change doesn't... it's out there, but it's really part of a much larger change. And once we address it from this getting at the underlying causes, we'll address so many problems. And to me, that is where the hope lies and our strategies need to be.

Wendy Hasenkamp (49:29): Well, thank you so much, Karen. Really, really appreciate you.

Karen O'Brien (49:32): Oh, thank you so much. It's been really a pleasure to talk.

Outro – Wendy Hasenkamp (49:39): *This episode was supported by the generosity of the Bess Family Foundation, dedicated to fostering kindness and caring for the earth and all beings through mindfulness and meditation practices. Mind & Life is edited and produced by me and Phil Walker, and music is from Blue Dot Sessions and Universal. Show notes, transcripts and other resources for all our episodes can be found at podcast.mindandlife.org.*

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