The Embodied Mind

AN INTERVIEW WITH PHILOSOPHER EVAN THOMPSON

PHOTOGRAPHS BY PRESTON SCHLEBUSCH

To be fruitful, the encounter between Buddhism and science demands intellectual boundary crossers—rare scholars who are expert in both realms, who can translate ideas across the divide and identify and critically appraise assumptions each side brings to the table. The philosopher and cognitive scientist Evan Thompson is one of these. Thoroughly grounded in Western and Buddhist philosophy and learned in science, Thompson has been dedicated to cross-cultural and interdisciplinary dialogue between Buddhism and cognitive science for over two decades.

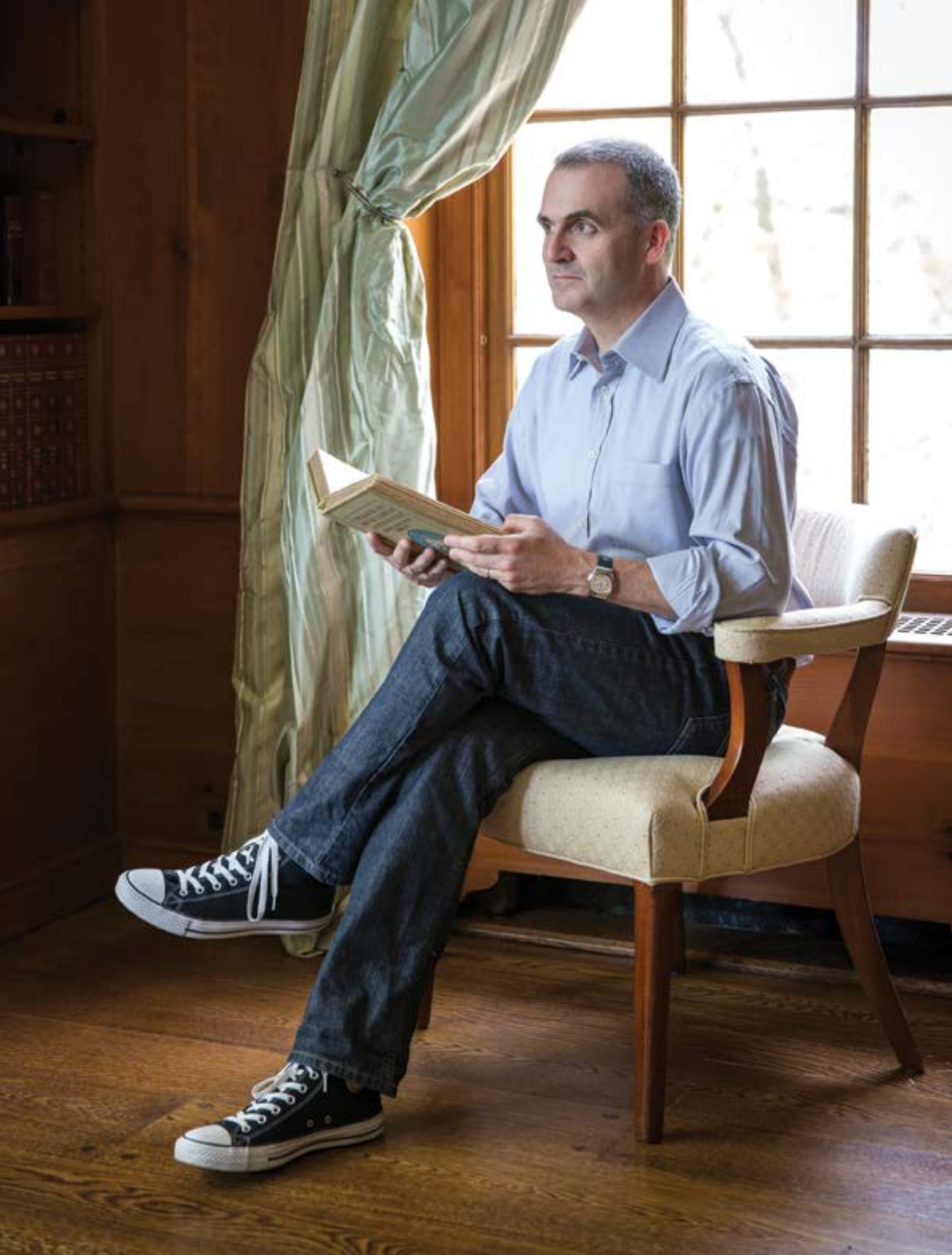
Bringing clashing points of view into conversation is a calling Thompson was born into. He is the son of the social philosopher and cultural critic William Irwin Thompson, who founded the Lindisfarne Association—an Esalen-like think tank and retreat devoted to "the study and realization of new planetary culture." Thompson grew up and was homeschooled at Lindisfarne, so from the time he was young— "a little kid gripped by philosophical questions"—he was surrounded by what he describes as the "passionate and sophisticated debate" of diverse thinkers from very different spiritual and academic backgrounds.

It was at Lindisfarne that Thompson met the renowned scholar of Tibetan Buddhism Robert Thurman. Thompson was so inspired by Thurman's vision of philosophy (as "a transformative path of rational liberation with a global heritage," Thompson wrote in a tribute to Thurman) that he entered Amherst College at the age of 16 to study with him. It was also at Lindisfarne that Thompson met the Chilean biologist, philosopher, and neuroscientist Francisco Varela, now recognized as the founding father of the dialogue between Buddhism and cognitive science. Varela lived for several months at Lindisfarne as a Scholar-in-Residence and became a Lindisfarne Fellow and a family friend. Later, when Thompson was a graduate student, he studied with Varela at the École Polytechnique in Paris and in 1991 coauthored with Varela and the psychologist Eleanor Rosch *The Embodied Mind: Cognitive Science and Human Experience*. This was the first academic book to explore what Buddhist philosophy and meditation practices could offer cognitive science and to promote an "embodied" or "enactive" view of cognition; in tandem with Varela's Mind and Life meetings with the Dalai Lama, which had begun in 1987, their book launched the Buddhism-cognitive science dialogue. *The Embodied Mind* has since been translated into seven languages and will be published in a second edition in 2015.

Thompson is now a professor of philosophy at the University of British Columbia. His other books include *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* and the forthcoming *Waking, Dreaming, Being: Self and Consciousness in Neuroscience, Meditation, and Philosophy*.

Tricycle spoke with Thompson at a conference that he co-organized at the University of California at Berkeley, where 15 top scholars from the field of Buddhism and science gathered to tackle the question "Given the current critiques of the Buddhism and cognitive science encounter, how might we proceed?" Thompson is among those who are steering the conversation toward not only compatibilities but also differences, even contradictions, because that is where the partners in dialogue have most to learn from each other—and where, if given the chance, they may even find surprising complementarity.

—Linda Heuman, Contributing Editor



"THE IDEA THAT MINDFULNESS IS A KIND OF INNER OBSERVATION REINFORCES THE MISTAKEN IDEA THAT THE MIND IS IN THE HEAD."

Almost two and a half decades ago, in *The Embodied Mind*, you critiqued a notion of mind that was already prevalent then and that continues to frame much of the current neuroscience research on meditation. What is that view, and what is wrong with it? We criticized the view that the mind is made up of representations inside the head. The cognitive science version says that the mind is a computer—the representations are the software, and the brain is the hardware. Although cognitive scientists today don't think the brain works the way a digital computer does, many of them, especially if they're neuroscientists, still think the mind is something in the head or the brain. And this idea shows up in the neuroscience of meditation. But this idea is confused. It's like saying that flight is inside the wings of a bird. The mind is relational. It's a way of being in relation to the world. You need a brain, just as the bird needs wings, but the mind exists at a different level—the level of embodied being in the world.

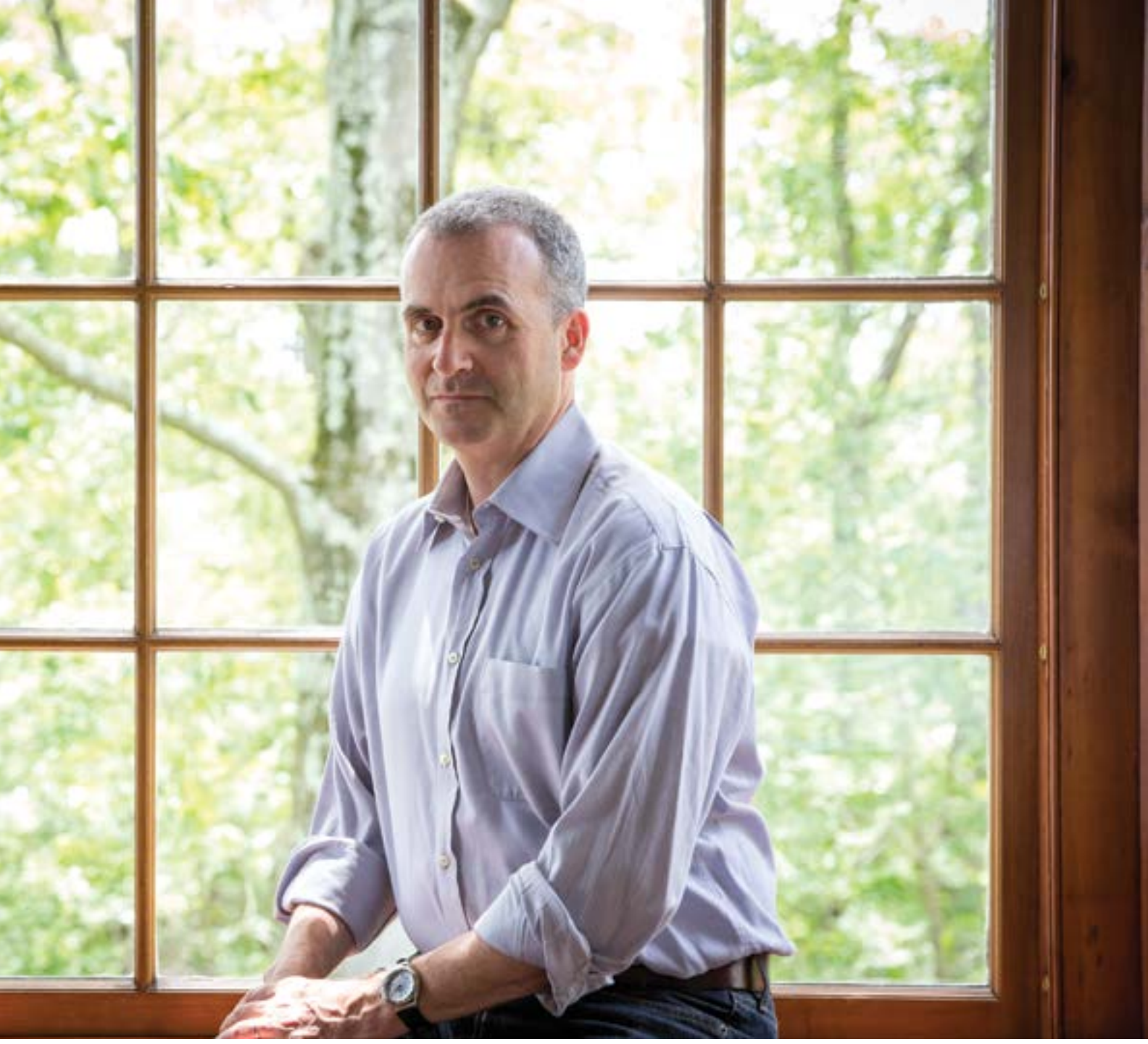
What's your alternative view of the mind? The alternative view we put forward is that cognition is a form of embodied action. "Embodied" means that the rest of the body, not just the brain, is crucial; "action" means that agency—the capacity to act in the world—is central. Cognition is an expression of our bodily agency. We inhabit a meaningful world because we bring forth or enact meaning. We called this view "enaction" or the "enactive approach."

In the enactive approach, being human is a matter of inhabiting the human world of culture and shared bodily practices. Of course we need our brain to do this, but we also need that world to be in place in order for the human brain to develop properly. The brain is what philosophers call a necessary "enabling condition" for mind and meaning, while enculturation is a necessary enabling condition for the brain. What's important is not just what is inside the brain but what the brain is inside of—the larger space of the body and culture. That is where we find mind and meaning.

It was early in your career—you were a doctoral student—when you cowrote *The Embodied Mind*. Looking back, do you have any regrets—things you would have changed, knowing now what you didn't know then? There was a certain way we talked about mindfulness that I now think is wrong. Sometimes we described it as a special kind of inner observation that lets you see the way your mind really is apart from being mindful—as if your mind were a box and your looking into it revealed what was there all along.

Do you mean the notion that in meditation you see "what really is there"? Yes, where "see" means looking inside to see how your mind really is apart from such looking. For example, we said that Buddhist meditation lets you see that your experience is really discontinuous and momentary, rather than a continuous flow. But one could just as well argue that certain kinds of meditation make experience gappy and then reinforce that gappiness by giving you a theoretical system that says that's how things really are, as the Buddhist Abhidharma philosophical systems do.

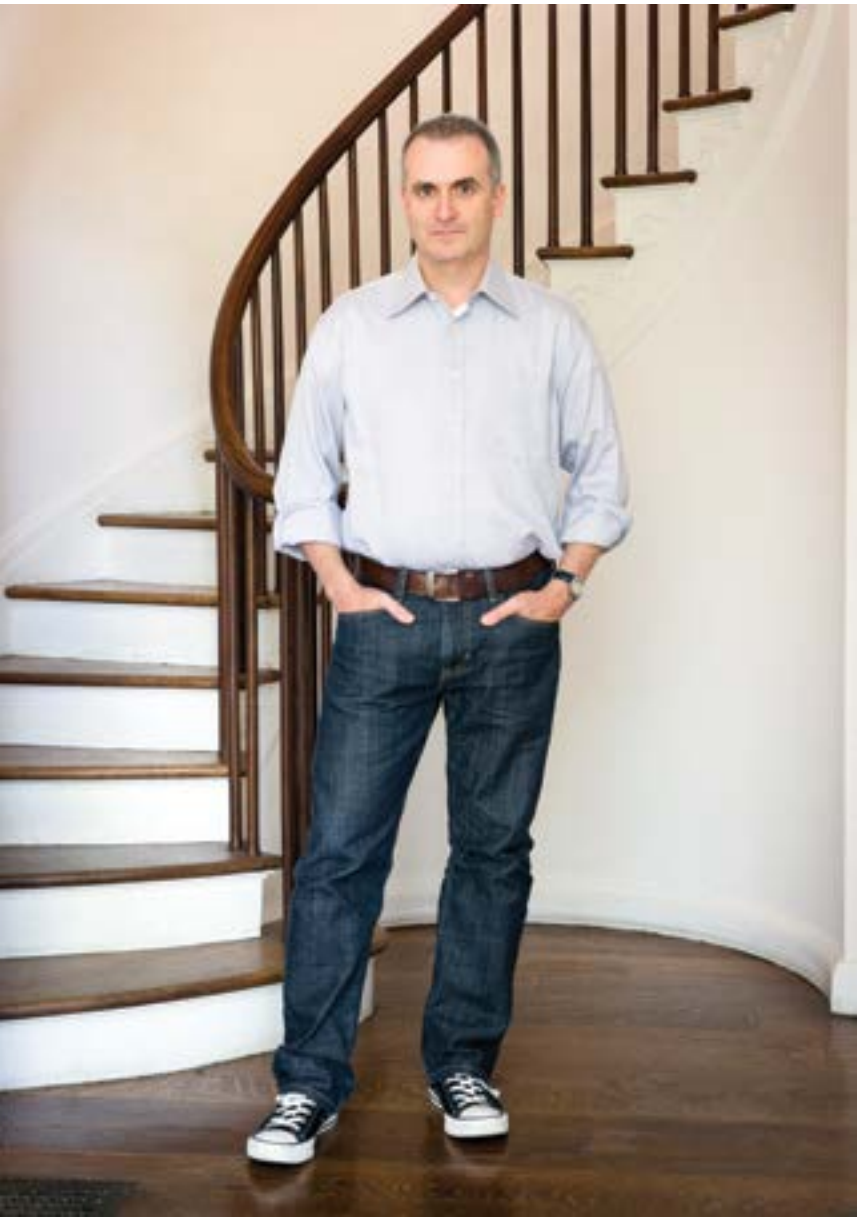
If we go back to the neuroscience of meditation, the idea that mindfulness is a kind of inner observation reinforces the mistaken idea that the mind is in the head. It leads to thinking of mindfulness as a special kind of inner monitoring that scientists using brain imaging tools can identify with the activity of neural networks. This is a mistake. Mindfulness depends on the brain



but isn't inside the brain. Certain neural networks may be necessary for mindfulness, but mindfulness itself consists in a whole host of integrated mind-body skills in ethically directed action in the world. It's not a neural network but how you live your life in the world.

Is the problem you are getting at the widespread assumption that mindfulness meditation is not mediated by concepts? Experience and concepts are interdependent. Whether there are nonconceptual modes of experience is a complicated matter that both Buddhist and Western philosophers have argued about a lot. But in most cases of human experience you can't have one without the other. Take science. Here you observe things, of course, but you can't see them properly unless you have the right concepts. If you just look through a microscope with no guidance on how to look at what you see, you have no clue what you're looking at. Even if you're doing high school biology, you need to have concepts like "cell wall" or "organelle"—to say nothing of what's happening at the edge of scientific discovery, where you're using new imaging technologies and learning to see things. So observation is happening there, of course. But also a *lot* of conceptualizing.

Similarly, if you go on a Vipassana retreat, you may spend the first day or so watching your breath, but then you're given a system of concepts for practicing mindfulness—concepts like "moment-to-moment arising," "pleasant versus unpleasant," "sensation," "intention," "attention," and maybe some categories from the list of elements, or *dhammas*, in Theravada Buddhist



"WHEN YOU'RE CONCERNED WITH MEANING, YOU ENTER INTO A DIFFERENT SPACE OF DISCUSSION WHERE SCIENTIFIC METHODS ARE NOT SUFFICIENT."

philosophy. It's a silent retreat, so this is the only thing you hear, and everyone else around you is doing the same thing, so this shapes how and what you experience. You get a powerful and socially reinforced conceptual system for making sense of what you experience. That system in that context may help to bring about certain nonconceptual experiences, but the minute you start thinking about them—which there's no way to avoid doing—you're back in the land of concepts.

Practitioners might hear something like this and wonder, "If I'm not turning inward and seeing things as they are in and of themselves independently of my observing them, then what is my practice about?" I'd say it's about commitment to a certain way of life and participation in a community (sangha) that supports that way of life. It's about cultivating what we think are beneficial qualities of mind and body, and beneficial ways of acting or being in the world, as in the eightfold path. I'd say that practice in this full sense of the term, which goes well beyond sitting meditation, is its own purpose or goal and is itself the expression of a noble way of life. It's what philosophers and psychologists call autotelic, an end in itself, not a tool or instrument for something else.

I object when people reduce practice in this rich sense to a tool or instrument. Some people use the analogy that meditation is like an inner telescope: Outer science uses physical telescopes for looking at the stars, and inner science uses meditation for looking at the mind. I don't like that analogy. It makes you think of your relationship to your own mind in an instrumental way. Your relationship to yourself is precisely *not* an instrumental one. A telescope is a tool for looking at something separate and distant. Meditation isn't like that. If you think that awareness is an instrument that enables you to look within, on that analogy you're thinking of the inner realm as one of objectivity—except it's not, because it's subjectivity. If you think of meditation that way, you can't help turning your mind into an object, which is precisely what the mind is not. So here I think there is an important difference between meditation and scientific observation, despite the importance of concepts for making sense of both. Meditation can be very powerful and transformative: it can be very generative of insight, deep understanding, and connectedness. But not because it's an instrument or tool that enables you to see a hidden inner realm.

You mentioned that the appropriation of mindfulness as an object of scientific scrutiny and research has created new forms of self-understanding for Western meditators, so that meditators start to identify themselves in terms of their inner life and their subjectivity in terms of mindfulness.

How does that happen? The ideas I'm working with here come from the Canadian philosopher Ian Hacking. He calls them "looping effects" and "making up people." When we categorize people—as poor, homeless, obese, gifted, and so on—we also change them as a result of how we interact with them based on these categories and how they come to think of themselves in terms of those categories. This is the "looping effect." Sometimes we even create new kinds of people who didn't exist before. This is "making up people." Take the category "citizen." We categorize ourselves as citizens, but there weren't any citizens before there were legal criteria and government procedures for applying this category. Hacking argues that this happens especially with medical and clinical categories.

I wonder whether this is happening with "mindfulness." An originally Buddhist notion is adapted for secular clinical programs like MBSR (Mindfulness Based Stress Reduction) and MBCT (Mindfulness Based Cognitive Therapy). To assess the efficacy of such programs, specifically the idea that there's a distinct "mindfulness" component, we need a way to scientifically define and delimit that concept. This leads to various scales for measuring mindfulness—based on what people report about themselves in response to questionnaires—and efforts to assess mindfulness behaviorally. Also, some scientists think there may be biological markers of mindfulness, such as the activation of certain brain networks. I've even heard some scientists and Buddhist teachers say that if we knew what these biomarkers were, we could use them to help people become more mindful. So we already have looping effects: We interact with people differently and they think of themselves differently because of this new version of mindfulness that our culture—which is to say, we—is creating. We seem to be making up a new kind of "mindful person." Think of the mindful education movement and mindful parenting, or mindful eating and mindful sex, or mindfulness-based mind fitness training in the military—the list goes on.

Why is it important to recognize that this process is occurring in the popularization of mindfulness? It sets up a dichotomy between "mindful" and "unmindful," where we fixate on mindfulness so that it becomes a kind of fetish, and that blinds us to how the concept or category gets used, especially socially and politically. One of Hacking's points—and here he's really taking his lead from Michel Foucault—is that there are always social and political interests and power dynamics at work in looping effects and in making up people. People always get organized in certain ways for certain ends. Why should we think that it's any different in the case of the modern mindfulness movement? The Slovenian philosopher Slavoj Zizek has argued that the current fetishizing of mindfulness fits perfectly into a consumerist corporate culture that needs to pacify itself from the endless stress of modern capitalism. My way of doing philosophy is very different from Zizek's, but I have to agree with him on this point. Those of us who work in this area have a responsibility to keep these looping effects and their social and political ramifications in critical focus. We need to know what we're gaining—and for the record, I do think that MBSR and MBCT are very beneficial—and what we're losing, or what we're creating that isn't beneficial. Buddhist scholars are contributing to this critical project by tracing the historical and philosophical evolution of the concept of mindfulness so that we can see how the Buddhist modernist and secular versions get generated. I try to contribute from the perspectives of cognitive science and philosophy by showing why it's not right to think of mindfulness as being in the head or brain, so we can see that it's social, relational, and ethical.

In 1996, Francis Crick stated that consciousness is now largely a scientific problem. As a philosopher, do you agree? If not, why not? No, I don't agree. There are important conceptual or philosophical issues that shape how we think about consciousness and how we investigate it. Crick's viewpoint, which most neuroscientists share, is that consciousness is in the brain, so the problem comes down to finding the neural correlates of consciousness. That's another expression of the mind-is-in-the-head idea. It's like saying a cathedral is in the stones. You need stones, of course, and you need them to be connected in the right way. But what makes something a cathedral is also iconography, tradition, and its being a place of worship. In other words, the larger context in which the structure is embedded helps constitute it as a cathedral. In an analogous way, consciousness isn't in the neurons or their connections. Here the larger context that constitutes consciousness—in the sense of sentience, or felt awareness—is biological: consciousness is a life-regulation process of the whole body in which the brain is embedded. In the case of human consciousness, the context is also psychological and social. So even if we suppose—as I think it's reasonable to do, though some Buddhists will disagree—that the brain is necessary for consciousness, it doesn't follow that consciousness is in the brain. There are many scientific questions about how the brain enables consciousness, but those questions are miscast if they're made into the problem of how to locate consciousness in the brain in terms of its neural correlates.

It's also worth pointing out that Crick thought we might have a solution to the scientific problem of consciousness by the year 2000! And we still don't have one.

So you don't think progress in understanding consciousness is necessarily about doing more experiments? No. I mean, experiments are great, but we need conceptual work, theoretical work. We may need to radically change how we think about things in ways that are still not clear to us.

You have said that in seeking a way forward for the Buddhism and cognitive science dialogue, philosophy should take the lead. Why? Buddhism has very sophisticated and technical traditions of philosophy, every bit as sophisticated and technical as Western philosophy. Here we enter the arena of concepts, analysis, abstraction, models, and arguments, all of which bring us closer to science. Buddhist philosophy is very concerned with analyzing cognition, concepts, and consciousness—the subject matter of cognitive science. So this is the arena where I see Buddhism and science as having a lot to say to each other.

I also want to foreground problems of meaning—how these different traditions conceptualize the mind and what's at stake for them in doing so. It's really the *humanities* that need to take the lead in this discussion now, not neuroscience. I think science

(continued on page 96)

is really important, so this is not an anti-science point; it's an anti-*scientistic* point. When you're concerned with meaning, you enter into a different space of discussion, where scientific methods are not sufficient.

I am particularly concerned to deploy that thought against the idea that the neuroscience of meditation should lead the way in this dialogue, because that's very much what the Buddhism-science discussion has been about for the past five or ten years now.

Has there been too much focus on the neuroscience of meditation? Yes, if we mistake this work to be a genuine Buddhism-cognitive science dialogue about the mind. Buddhism isn't reducible to meditation—most Buddhists throughout history haven't practiced sitting meditation. And cognitive science isn't the same as neuroscience; it's a broader endeavor concerned with a comprehensive scientific understanding of the mind and includes not just neuroscience but psychology, linguistics, computer science and AI, cognitive anthropology, and philosophy.

A cognitive science approach to meditation is concerned not with meditation per se but with using meditation to cast new light on basic cognitive phenomena like attention or consciousness. This means using meditation to generate new data and to test rival theories and models of the mind or to devise new ones. This can be especially valuable for the neuroscience of consciousness in conjunction with psychology and cognitive anthropology.

There is a widespread assumption that once certain metaphysical commitments are taken off the table—karma, rebirth, and the possibility of enlightenment on the side of Buddhism; physicalism, reductionism, and the causal closure principle on the side of science—Buddhism and science are well-matched enterprises because they are both empirical systems interested in investigating the nature of reality. University of Michigan professor Donald Lopez has argued that such bracketing doesn't actually work to produce compatibility, because it takes out of play the most foundational topics on both sides, topics that are both regulative principles and the site of intractable differences. Do you think this strategy works? I think it has worked sometimes. In some way, the Mind and Life dialogues have been a paradigm of that bracketing strategy. But the most interesting moments in those dialogues are when the brackets come off. For example, to my mind, the richest of those dialogues is one of the early ones that was about the states of sleeping, dreaming, and dying, seen both from the Tibetan Buddhist perspective and from the perspective of Western science, so you have the neuroscientific viewpoint about the nature of consciousness confronting the Buddhist viewpoint. There's a moment when the Dalai Lama gives an explanation of his view of the dying process and of the subsequent bardos, a traditional Tibetan teaching, in the presence of the scientists. And the scientists push back against the idea that there is a consciousness that could somehow have a life apart from the brain. So the brackets are off and these

views are confronting each other. Those are the moments I always look for.

Are there other strategies that might be more effective than bracketing for a meaningful Buddhism-science encounter? A different strategy, the one I use, is to conduct the dialogue in the arena of cross-cultural philosophy. Here the dialogue partner on the Buddhist side is Buddhist philosophy. In philosophy, everything can be up for grabs, but any move you make needs argumentative justification. Philosophy is concerned with issues of meaning. Science must always presuppose a space of meaningfulness that it can't fully account for, and philosophy is concerned with that. Philosophy can show the limitations of certain scientific viewpoints—as I was doing just now with Crick's view of consciousness—so we can see more clearly the phenomena we're trying to understand. The Buddhist philosophical tradition becomes very important here, because it has original insights and arguments to offer.

From this cross-cultural philosophical perspective, we can't take science for granted; we have to remember that it operates within a human community of shared norms and values and practices—what phenomenologists call the "lifeworld." Science itself is a social practice that has the force and meaning it has because of its place in our lifeworld. Science can change the lifeworld, but it can never step completely outside it and provide some absolutely neutral perspective. To put the point another way, philosophy is concerned with the meaning of science—something that science on its own can't tell us. And Buddhist philosophy is as relevant as Western philosophy for thinking about the meaning of science.

This perspective can also help us to remember that there are different individuals and communities in the Buddhism-science encounter, and they have different things at stake. The Dalai Lama is a Tibetan refugee and a political figure, and so he's going to speak from a particular perspective; he has certain interests—intellectual and political and personal—that are motivating his participation in the dialogue. Buddhists like B. Alan Wallace and Matthieu Ricard are scientifically educated Westerners who have become Buddhists, so they're going to have a different stake in the dialogue. Tibetans like Thupten Jinpa, who was brought up in the refugee community and then was educated at a Western university, are going to have another perspective. Or take Francisco Varela, the founding scientist of the Mind and Life Institute, who was a brilliant neuroscientist and became a Buddhist through a charismatic Tibetan Buddhist modernist teacher. In my own case, I grew up in the 1970s at the Lindisfarne Association, an institute that brought together scientists (including Varela), philosophers, and contemplative teachers, and this made me want to study Asian and Western philosophy in college and graduate school. So we're all participating in a shared discussion, but we have different backgrounds and histories. Our lifeworlds are shared, but we also have our particular emergence into them from our own places. Those kinds of things are not commented on very much, but they're

actually at the heart of the encounter. After all, it's not really Buddhism and cognitive science that are encountering each other; it's Buddhists and cognitive scientists.

What do you see as the way forward for Buddhism and cognitive science? What I'd like to see is a collaborative effort to develop a much richer understanding of the human mind—a cognitive science of wisdom, for lack of a better term. For example, although self-knowledge is a topic of cognitive science research, it has yet to be informed by the kind of ethical and contemplative perspective that Buddhism upholds. We need to bring into cognitive science the recognition that the human mind can cultivate mature emotional and ethical capacities of benevolence along with cognitive capacities of deep insight and understanding. Right now cognitive science has a view of the mind that's rather narrow, where the database for mental function is mostly college students. Also, informed by that kind of cognitive science endeavor, I'd like to see a much more critical perspective on what's happening with the commodification of mindfulness and the social looping effects I was talking about before.

Do you feel that your community of researchers, who have developed and been engaged in this dialogue between Buddhism and cognitive science, have any responsibility for how that research has been appropriated? Yes, definitely. I think it's very important, as I was saying before, that we draw on Buddhist studies, philosophy, and cognitive science—and I would add the history of science—to keep critically in view the larger social and political context in which we're working and how we may be contributing to deleterious kinds of looping effects. I've become very concerned about the growing fetishization of mindfulness I was talking about and how this is being appropriated by the corporate elite, including very right-wing elements. I was very dismayed to see the Mind and Life Institute co-sponsor an event with the American Enterprise Institute—a conservative think tank that helped give us the Iraq War—on "Happiness, Free Enterprise, and Human Flourishing." "Free enterprise" is a contradiction in terms that has caused a huge amount of suffering in the world. It disturbs me to see what appear as dumbed-down versions of mindfulness and hyped-up science being advertised at the World Economic Forum in Davos. Some of my Buddhist and scientist friends will say that participating in such events is skillful means, but I think that's naive. Social philosophy and policy aren't my areas of expertise, so I don't have readily available recommendations, but it's become increasingly important for me to think about these matters. My hope is that Buddhist studies, cognitive science, and philosophy can work together to analyze what's going on in ways that can be useful to activists and socially engaged Buddhists in their efforts to challenge consumerist appropriations of mindfulness and work for positive social, political, and environmental change. ▼

Linda Heuman is a *Tricycle* contributing editor.