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Kinship, Community, and Consciousness – Emergence Magazine

43-54 minutes

Emergence Magazine

All the characters in *The Overstory* have encounters and experiences with trees that greatly impact them and lead them on life-changing journeys that we follow during the course of the book. As I understand it, the seed behind *The Overstory* was an unexpected encounter you had with a redwood tree here in California. I wonder if you could start off our conversation by sharing this experience and how it led you to want to write a book about trees.

Richard Powers

I'd be happy to. I had actually written on environmental subjects in the past, and in particular, my 2006 novel The *Echo Maker* took the question of the relationship between the human and the nonhuman as one of its central preoccupations. But I wasn't particularly tree conscious myself. I guess I was as a small child, as most small children are. The ability to look at a tree and see an animate, active agent is pretty ubiquitous in childhood, and we get that drummed out of us along the way by various means.

By the time I moved to Northern California to teach at Stanford,

I had sunk pretty deeply into that kind of myopia that we humans suffer, that is characterized by the belief that we are pretty much the only interesting game in town. Although I had treated the nonhuman in my previous eleven novels, I think I was, without knowing it, pretty colonized by this idea that the human story was self-generating and self-justifying, and it was with that state of mind that I began teaching at Stanford, which is a tremendous technologically oriented school, and probably the primary generator of the phenomenon of Silicon Valley. From my house in Palo Alto, I could easily bike, within just a few minutes, to the headquarters of Apple, and Intel, and HP, and Google, and Facebook, and Netflix, and pretty much the whole gamut of companies that had been so instrumental in creating the present and that were very busy creating the future.

I remember undergoing a medical scare that made me quite conscious of my own mortality. I was in my mid-50s and realized at this juncture that whether or not I had to face a serious health crisis this time around, I would soon enough. It was with that enhanced awareness of mortality that I found myself at a dinner party one night in Palo Alto, and the topic did come up, and we all began sharing. We aging professors all began to share our mortality stories, and there were folks there from the community of Silicon Valley who were saying that it's a litany there, that we should all just hold on a little bit longer, because if we can make it through the next few years, technology was going to cure all the design flaws of biology, including death. I guess it was that sense of not being sure that this is a future that I can reconcile myself to, and that sense of

the oppressiveness of the melioristic and transformative engine of this place, that made me turn increasingly toward the Santa Cruz mountains up above town, between the valley and the Pacific.

And in order to escape that sense of mastery and control—a future in which all things would be managed to our benefit—I would disappear for longer and longer periods of time up into the trails of the Central Peninsula, and the Santa Cruz Mountains, and into the long past. These mountains—you've probably been down there at one time or another—they're covered with second-growth redwood forests and other very interesting forest biomes. It's hard not to walk through a redwood forest, even a fairly young one, without that profound sense of the spiritual.

You know, these are enormous trees. They're like the columns of a church. The sense of verticality is immense. The sounds, the scale, and simply the overwhelming, haunting silence of those forests is very sobering. And I guess I wasn't initially extremely conscious of the fact that these were fairly young trees that were only one hundred years old or so—a redwood can do amazing things in less than a century—they're still enormous trees.

Walking through this second-growth forest one day, I came across a tree that had somehow, by the accident of history, escaped the loggers that had clear-cut these mountains. If you are impressed by what a redwood can do in a hundred years, seeing what one can do in fifteen hundred years is absolutely mind-altering. And there I was, standing in front of a tree that was the width of a good-sized house, and a football field in

height, and almost as old as the Roman Empire. A number of things came clear to me in that moment. One is that these mountains would have been covered in trees that size, and they had all been cut down to build and rebuild San Francisco, to build Palo Alto, to build the railroad that Leland Stanford had so profited from. Essentially, it became clear to me that Silicon Valley was down there because these redwoods were up here, and the story that we tell about the technological transformation of the world—in which we are the central, sole heroes—was not actually telling the whole story, the whole truth. I guess it was also this sense that life was operating on a frame so much longer, and larger, and ingenious than I had previously realized that really kicked me in the head.

By the time I got to the bottom of the mountain, I was on a journey that would last for years and years, and that has continued beyond the publication of *The Overstory*. And it's the journey to understand trees, for sure—to see this huge taxonomic category that is so instrumental in transforming the world—but it's also a journey to reappraise what the human is and to tell the human story in a more complete, robust, and honest way. How deeply dependent we have been upon these communities of other creatures that we have been tempted to treat as mere commodities.

EM

In her review in the *New York Times*, Barbara Kingsolver wrote, "People will only read stories about people, as this author knows perfectly well. *The Overstory* is a delightfully choreographed, ultimately breathtaking hoodwink." And in many ways, that felt true to me. At first you feel as though the

humans and trees are deeply intertwined but on somewhat equal footing as characters. And you feel deeply connected to the struggles the characters are going through. But then, over time and as the characters' stories converge, the trees really feel as though they take over as the central character. Can you talk about your narrative approach for working with and interweaving the human and the nonhuman stories?

RP

I suppose that Barbara Kingsolver is right. There is a little bit of a hoodwink involved, or let's call it a bait and switch, in the book, in which there is an invitation initially to read the book as a classic work of literary fiction that's immersed deeply in the lives of individuals who seem to be making meaning in and for themselves. Gradually, using this seduction shifts the readers' focus to this broader question of who we are inside the larger community of life.

You could also say that there is a kind of hoodwinking in status quo literary fiction that does not attempt to situate us in that larger context. The hoodwink would be the invitation to the reader to believe that there is a separate story called humankind and a separate story called nature. This has never really been the case in world literary fiction until fairly recently, within the last couple of centuries in the post-industrial West. In some ways, what I was doing in *The Overstory* was trying to return to that time, in those places that knew that you could not tell a human story as if it were separate from the story of all the neighbors. It was a great comfort and a great astonishment, in a way, for me to realize that most of world literature for most of human history and in most places around the globe would not

have lifted an eyebrow at the idea of this other kind of hoodwinking, this telling of our story through their stories. It is, in a sense, a return to this more deeply indigenous kind of fiction in which there's no separating us from the neighbors.

EM

You said that stories that expound an individualist, human-exceptionalist, commodity-mediated worldview are a late-day cultural invention, as you just described in many ways.

RP

I think that invention starts to happen around the early nineteenth century in Western Europe and in North America, where various technologies and our increasing ability to manipulate time and space seduce us into thinking that we can go it alone, that somehow we're no longer a dependent member of a community. Within a very short period of time, that seduction has become so complete that it takes conscious effort to see the degree to which we each have been colonized by it.

EM

And you've also talked about how we need stories that focus on the nonhuman, or the human and the nonhuman relationship, if we are to address the tremendous ecological crisis that we're facing.

RP

Well, in fact, you can understand the ecological crisis that we're facing as a direct, inevitable consequence of the attitude of humans' separatism. The idea that we are exceptional and independent and autonomous has created a culture in which

these great, teeming, reciprocal communities of living things became nothing but commodities which we could use with impunity, as if somehow the very cycles of interdependence were no longer something that we had to answer to.

EM

But in *The Overstory,* the characters learned to invest in trees with the same sacred value that humans typically only invest in themselves. And you said in doing so, they violate this individual-centric capitalism taboo. It's almost like there's a protest that's happening in the stories of the characters unfolding.

RP

Most of them begin very comfortably inside that world that we all inhabit, where meaning is private and personal, something that we construct for ourselves—it depends on amassing a certain degree of comfort and power. All the things a person in North America, when asked what would be a meaningful life, would enumerate: the ability to move freely and powerfully through the world, and to enjoy the material comforts necessary in order to reflect, and enjoy, and socialize with other people. But somewhere along the way, something happens to each one of them to trip up that assumption and to yank them out of that sense of a purely personal and synthetic and invented meaning and push them out into not what we humans call the real world—by which we usually just mean the social, the invented world—but into the living world, and force them to take the place that they're living in as something alive, with agency, and hugely occupied by very specific creatures whose desires are different from their own.

That's the moment of great awakening. That's the conversion moment that the book tells again and again through these various characters. It's one that so transforms individual consciousness that none of these characters can take for granted their own sense of privilege or pride of place in the world. Suddenly, they are forced to a deep reckoning with the degree to which their own existence has always been contingent on the air, and the water, and the soil that these other creatures are maintaining and creating.

EM

You talk about your characters undergoing a conversion, and you've also talked about your experience in writing this book as being—I think you actually said—a religious conversion.

RP

Minus the deity, I'm afraid. It's kind of what Bron Taylor calls dark green religion—it's the realization that there is a teleology, there is a vital force, and it's in the form of this self-replicating molecule that has gone through millions and millions of variations and is just out there animating the planet. I guess if you had to name the religion that I was converted to, it would probably be animism.

EM

Trees became so much more for you than the subjects of your book, and I'm curious to hear more about how writing this book changed you. What was the result of this conversion to animism?

RP

Well, I'll tell you something very specific. This is my twelfth

novel—I've been writing novels for over a third of a century. It's the first novel that ever moved me across the country and literally changed my life in terms of what I do all day long, how I live, and where I live. The story is this: I was stunned, when I began to read about the redwoods of Northern California, to discover that of their initial range, somewhere between only 5 and 2 percent of old-growth redwood forest still exists.

As I read deeper into the history of trees in North America, it stunned me, once again, to discover that that same proportion holds true for all of the forests of North America—that of the four great continent-spanning forests that were intact when Europeans first arrived on this continent just a short time ago, only 2 to 5 percent of the primary forests remain. I'm an easterner; I lived and grew up and spent most of my life in the Midwest. And I kept reading that there are almost no old-growth forests left east of the Rocky Mountains. The number is even less than 2 percent. The number of primary forests in the West is slightly higher, and the average comes out to be between 2 to 5 percent. I kept reading that if you wanted to see what an eastern old-growth forest looks like, one of the best places—one of the only places—that you can go to is the Great Smoky Mountains on the boundary between eastern Tennessee and western North Carolina. This is one of the largest, contiguous, remaining old-growth forests in the eastern United States and one of the few places you can go to get a feel of what a broadleaf deciduous forest looked like before the Europeans—indeed, looked like ten thousand years ago.

I made a research trip about four and a half or five years ago to come and see the Smokies, because there's still one hundred

and twenty thousand acres of uncut primary forest inside the boundary of the National Park, about a quarter of the National Park. I went into this thinking that I knew what an eastern forest looked like—I'd grown up around them, and I've hiked in them all my life.

And indeed, when I started in on this trip to see the old-growth, I was walking through forests that were more or less recognizable to me—they were the regrowth forests, the ones of a hundred years old or more. But when I crossed that threshold from a regrowing forest—recovering forest—into the old-growth, it was genuinely like that moment in *The Wizard of Oz* where it goes from black and white to color. You don't have to be forest literate when you walk onto these trails that go up into the old-growth. You cross a threshold, and it looks different, it smells different, it sounds different. I was up at elevation in the middle of a forest, and I was seeing sights, and hearing sounds, and smelling smells that could very well have been experienced at the end of the last ice age, and that would have been everywhere on this continent. It was a moment at least as powerful as the one when I ran into the old-growth redwood in California. I just thought, this is my country—this is the legacy, and endowment, and the core principle net of natural capital in the eastern US. And you have to work hard to see it.

I left that trip really shaken by that experience, and eight months later, I was still thinking about that, and thinking about how I felt, and thinking about what those places look like. I just thought, boy, if I am still obsessed with this almost a year later, that's got to say something. So, I went back to the Smokies,

and I bought a house right on the edge of the park, and I've been living there ever since.

EM

What's that been like for you, these last few years, being so close to that forest and spending so much time in it?

RP

Well, that's exactly what I meant when I said it's profoundly changed my day-to-day reality. Throughout all the years of my career as a writer, since I was a subscriber to that idea that human reality was the reality, and social exchange was the primary way of making meaning in my private life, I had a tremendous sense of literature as commodity and productivity. Each day, I would sit and write until I had one thousand good words. And I did not leave my desk until those words pleased me. Now, I wake up, and I go outside on the deck, and I say, "What is it doing out there? What are my possibilities for discovery and connection?" If the weather is right, I go out. Just as the initial requirement for my day was my thousand words, now it's like I don't feel good about myself unless I've been present or attentive to some living community that gave me a sense of my own personal place.

And it was the shifting of that work ethic—from a thousand words to four or five miles—that has completely altered my own sense of vocation as a writer. It's changed my style. It's changed the rhythm of my days.

EM

The Overstory is filled with myths about trees—Greek, Egyptian, Indian, Chinese, and Native American myths—and

you've said that you are trying to resurrect a very old form of tree consciousness. Could you talk about this and your use of myth throughout the book?

RP

It was thrilling, as I began to do my research, to discover that wherever I looked, in whatever culture, if I went far enough back, trees were right at the center of the foundational stories. In particular, this notion of permeability, this idea that we weren't really all that separate, that we weren't as far away from these other creatures as we believed. The great example of that for our own tradition would be Ovid, and the *Metamorphoses* is a central organizer of the book. It's almost as if these stories—standing as they do, outside of the human-exceptionalist story, either long before or on the threshold of this notion of setting off into our own mythos—these stories are warnings that call us back to kinship. Again and again, they are about how our destinies, and our bodies, and our souls are contingent and intertwined with trees.

It was also really marvelous—as I dug deeper into the mythologies of transformation, and metamorphosis, and communication, and kinship—to discover how deeply derived cultures are from the plant life of their location. There are somewhere between sixty and one hundred thousand species of trees on the planet, and that number itself is so fluid, and trees have been around for so very long. The basic solution of arbor essence goes back four hundred million years, which is roughly two thousand times longer than the entire history of our own species, anatomically modern human. So that's a bit sobering in itself, but because that category is so taxonomically

loose and so dependent upon the local conditions of geography, the idea of what a tree is, is hugely variable. We know that, in a fairly banal way, to grow up in New England and to be surrounded by sugar maples produces a very different kind of consciousness than if you were to grow up down here in Southern Appalachia and be surrounded by tulip poplars, and hickories, and rhododendrons, and an entirely different experience again growing up in Northern California surrounded by redwoods, or in the Southwest in the shadow of giant saguaro cacti. The plants of an area are absolutely indispensable in the formation of the local character of humanity.

Part of the technological myth—part of this seduction of the huge leverage that our prosthetic tools have given us—is that we can globalize and become a kind of single culture, independent of where we live. So much of the push of post-industrial North America has been toward homogenizing place. You can think about this as you travel, how much of the world that you're traveling through has been redesigned in order to comfort you with this illusion of familiarity and continuity. To sit in a Comfort Inn, or a La Quinta—or in some interchangeable place on some interchangeable interstate, watching some interchangeable cable program in this interchangeable culture that we've created—and then, to look out the window and see that remnant of native life that reminds you, oh wait a minute, I'm not in Kansas anymore, or California, or Tennessee. It is quite a remarkable moment to remember just how badly deformed we've come to think about place and how amnesiac we've become about the power of place to be something

different, everywhere.

EM

The myths offer opportunities for remembrance and kinship, as you describe. But they also do a remarkable job of creating awe and wonder. And one of the things that really struck me in reading *The Overstory* is how instilled with a sense of awe I was as a reader, not only for trees but for the broader, living world. And it seems that instilling a sense of awe and wonder is key if we are to build respect and reverence for the living world and respond to this ecological crisis from that place of respect and reverence, and that stories have a key role to play at this time. Could you talk a bit about that?

RP

You've said that very beautifully, and my initial feeling is that I'm not sure how I can enhance upon what you've already described. I do have to say that there are components of awe that make it a difficult lesson for 2020 North Americans, because awe as an emotion is close to other emotions that we've been taught to be deeply uncomfortable with. Awe and fear are not that far from each other, and our whole culture is based upon the attempted annihilation of fear, the myth that we can somehow make ourselves safe.

Going all the way back to what I was saying about Silicon Valley, where if you just hang on a little bit longer, you won't have to die—that little myth is really insidious in the way that we live, that somehow we can avoid pain, we can avoid loss, we can avoid mortality through the power of our technologies. We're not comfortable with fear. The other emotion that awe is very close to is humility. The realization that there is no

separate mode of existence, that our very lives are dependent upon the lives of others, over which we can have no control, and the renunciation of control is something that does not come easy to us. It's not simply sufficient to be appreciative or amazed or delighted by the immense diversity and fecundity and ingenuity and inventiveness of other living things. To be truly filled with awe, you also have to be aware of your own transience, your own ephemerality, your own relative insignificance in this huge community. Those aren't easy for us—to go from the lord and master to just another member of a big community. That's a tough lesson. That's a tough step.

EM

The different relationship to time between humans and trees is a theme that runs throughout the book and is beautifully illustrated in the opening chapter about the Hoel family's relationship to a chestnut tree. John Hoel, whose father planted the tree, decides to capture the tree and see what the thing looks like sped up to the rate of human desire by taking a photograph of the tree in the exact same place each month, and this then continues for several generations. I'm curious how your relationship to, or your understanding of time has changed through the course of writing this book.

RP

It was really the great challenge of the book to try to find literary devices that would allow me to put trees and people adjacent to each other as characters, because of this profound difference in their scale of time.

The time-lapse photographs, or the long project of taking individual photographs and then turning them into a kind of flip-

book of a century worth of still photos, was one device that I use to translate tree time into human time. And then there were others: for instance, there's a moment when Douglas Pavlicek is falling out of the sky—his plane has been shot down in Southeast Asia. The narration, which is operating on the time frame of this guy who's accelerating at thirty-two feet per second per second toward the surface of the earth, is suddenly interrupted, and the story backs up a couple of centuries and starts telling about how a banyan tree on the ground beneath him has unfolded, having been pollinated by this one unique species of wasp that corresponds to the one unique species of fig. The banyan unfolding into a multiple-trunked, small, village-sized tree over the course of centuries is handled in about a paragraph or two, and then it cuts back to Douglas, who now lands safely in the branches of this tree that conveniently has taken the last couple of centuries to grow up just underneath the spot where he's falling.

I use different kinds of devices like that to try to playfully translate human time into tree time and vice versa. But it's an immense challenge, because tree time—either at the level of the individual, or the level of the communal organism, or at the level of the species—just dwarfs everything that we can think of when we think of duration. A tree in the Great Basin in the White Mountains of California, the bristlecone pine, where individual bristlecone pines can live to five thousand years or more—who knows, we haven't found the oldest one. Even five thousand years is mind-blowing, because you're starting to go back to the Great Pyramids, you're starting to get back to that moment where humans invented writing, and to think that

individual trees were alive when we were blundering toward those first technologies is really mind-blowing.

There's also a moment in the book where Patricia Westerford stops in a place in Utah to visit an aspen clonal colony. One of many amazing things about aspens is that the individual trunks of a grove of aspens might only be sixty, seventy, or eighty years old, but they're connected to a root mass underground that has been spawning for tens of thousands, even hundreds of thousands, of years. Patricia is meditating on this difference between the time above the ground and the time below the ground. And when you start to think about an individual organism that has been growing out of the same root mass for as long as the human species has been extant, it's tough to put those stories in juxtaposition with each other because of just how profoundly different their narrative frames are.

EM

Did you end up feeling smaller as a result of being dwarfed by this new sense of time that you were connected to?

RP

It depends on what you mean by "you." In the sense that we're most familiar with it now—that kind of private individual—sure, humility and fear and insignificance were all feelings that I felt as I made this journey, but that's not a genuine or legitimate perception of being. It's a cultural illusion, and if you allow kinship, then the question of you becomes more permeable. What happened to me along the way was I began to identify across species boundaries. I began to feel like the journey is so profoundly imbricated and knotted together that my own destiny and the destiny of these other things were not

anywhere near as separate as I thought they were when I started the journey. So, did I become smaller and more vulnerable? Yes, but I also became larger. In a Whitmanesque way, I started to contain multitudes, or they started to contain me.

EM

In the history of the mainstream environmental movement, the idea of saving the world has been a dominant narrative, one that you could say perpetuates a human-exceptionalist worldview and often ignores the deeper roots of the ecological crisis. And as several of the characters in *The Overstory* realize, it's not the world that needs saving: it's us. This seems to be a realization that more people are coming to, and perhaps one reason why *The Overstory* struck such a chord with readers. How do you see us being saved? And do you think it's possible, collectively?

RP

In the shortest imaginable formula, we have to escape the life of commodity and replace it with the life of community. We have to give up this notion that human destiny is to manage and control and to dominate, and replace it with the idea that human destiny depends—as all other destinies do—on making ourselves better at adapting to the environment, because the environment is 99 percent living things.

What's going to be required is a conversion of consciousness. I call it plant consciousness. We have to—one by one, until we reach a certain critical threshold—begin that journey into interdependence, into reciprocal communal existence. There's a beautiful line in Thoreau. He says, "Breathe the air, drink the

drink, taste the fruits. Live in each season as it passes. Resign yourself to the influence of the earth."

We need to change the human program from one that says, take control of the seasons, to one that says, belong to them in the most ingenious and leverageable way. How did we ever think that we could do anything else? Well, I know how—we got this incredible principle inheritance in the form of petrochemicals, which, incidentally, are the legacy of four hundred million years of plant life. We got this immense fortune that gave us the illusion of autonomy. And we began to live as if we did not have to belong to the cycles of living things. The immense power in that concentrated energy was so enormously leverageable and so enormously seductive that we truly forgot that all forms of life are accountable to the basic cycles of energy exchange on this planet. Like any kid who gets an inheritance and squanders it, we're now coming to a reckoning. We're now realizing the finite nature of that kind of life and the immense costs involved in having lived that way for so long.

EM

One of your characters, the scientist Patricia Westerford, makes discoveries about tree communication that echo the work of Suzanne Simard's groundbreaking work revealing the complex layers and levels of communication and nutrient sharing between trees, the kinship that's present there in trees and forests as a whole. It seems that these scientific revelations point to a need to rethink how we understand natural selection and survival of the fittest and how we perceive the relationship between competition and

cooperation. I'm curious to hear your thoughts on this.

RP

Let me start by saying that Simard's work is truly extraordinary, and she was a voice in the wilderness, and she did suffer a lot of rejection along the way, in a way similar to my character, Patricia Westerford; but she actually isn't alone. There were many researchers, even a generation or more before Simard's work, that were laying the foundation of this whole new understanding of tree interdependence and communication. It began with research into over-the-air communication, the way in which an individual tree under assault will begin to pump out chemical signals that have the effect on nearby trees of making them begin to preemptively produce insecticides—chemicals that are unpleasant to ruminants, for instance.

In other words, the trees are sharing a vast immune system, where the damage to the forest as a whole is reduced because individual trees produce signals that alert other trees. Underground sharing is equally astonishing, especially now that it's been demonstrated that it crosses the species barrier, so that fungi in trees that are in a mycorrhizal symbiotic relationship—where the tree supplies sugars and other hydrocarbons to the fungus, which can't photosynthesize for itself, and the fungus reciprocally sends secondary metabolites from the soil back up to the trees—is, in itself, remarkable enough as an example of just how deeply seated symbiosis is in every ecosystem.

But the fact that a Douglas fir and a birch might be sharing resources through fungal intermediaries really blows away this idea that we have, the sort of crude public understanding that

it's a jungle out there, by which we mean it's every species for itself and every individual inside that species for itself. Once you begin to see how deep-seated cooperation is in the heart of all ecosystems, it's almost embarrassing to have to own up to this idea that has filtered into social understanding, where competition is the only engine that's going on out there, which of course would be ridiculous. I mean, to compete to the exclusion of the other living things in your ecosystem would be to die a very lonely death.

The fundamental notion of natural selection is still intact. But what's the new appreciation, the ways in which the new appreciation has transformed that formula? It has to do with the realization that fittest for the environment doesn't mean fittest for some sort of static set of energetics, a finite pool of energy that's coming into a fixed system. The environment is other living things. So, the fittest organism for an environment is one that's most fully and robustly and sustainably intertwined with the other living things in its location.

If anybody ever comes back and says, "Well, yes, symbiosis in all its forms is a deep component of ecology and a deep element in natural selection, but you can't make a claim that it's the dominant one"—I think the answer is to remember that every cell of every complex multicellular organism is itself a symbiosis. All complex cells resulted from this endosymbiotic event in which two simple cells—instead of one digesting the other—began this system, this barter system whereby their inputs and outputs became inseparably linked. There is symbiosis at every single level of living things, and you cannot compete in a zero-sum game with creatures upon whom your

existence depends.

EM

In Neelay Mehta's story—the genius computer programmer and game designer who, like you, had a powerful encounter with a redwood in the hills above Silicon Valley—you seem to be exploring the relationship we have with technology as a tool to either help or hinder our efforts to learn how to live in relationship with the natural world. In an interview with the *L.A. Review of Books*, you said, "Will we double down on the great migration into symbol space, our decampment into Facebook and Instagram and Netflix and the *World of Warcraft*, the road that we have already traveled so far down? Or will Big Data and Deep Learning allow us to grasp and rejoin the staggeringly complex processes of the living world? The two possibilities are not mutually exclusive. Indeed, they're inseparable aspects of the new ecology of digital life." I wonder if you could talk a bit about this new ecology of digital life.

RP

As you were framing the question, I was thinking, to look at the affordances of the digital is not entirely different from looking at the affordances of any technology. Every time we come up with one of these prosthetic leverages, there are, all of a sudden, a whole raft of new pathways that can produce both extremely positive valences for the future of society, and by the same token, extremely dangerous and destructive and negative ones.

Think of a knife. I don't know at what point in human history knives were invented, but there was probably a discussion—you know, oh my God, that thing is dangerous. Well yes, it is.

And it's a deeply sinister technology. It's a deeply beneficial technology when you use it to go hunt and to cut vegetables, and a deeply sinister one when you use it to kill other people.

You can look at Plato and read Socrates's objections to writing—all the bad things that are going to happen with writing, how it's going to destroy our memories and depersonalize the world and make possible the leveraging of incredibly dangerous ideas—and all that is deeply true. Writing has really unleashed a whole can of worms that we haven't caught up with and that we haven't really seen the end of. To look at digital space and to wonder about its positive and negative affordances is a deep question and a complicated one.

There have been people who have read *The Overstory* and who wondered why the Neelay story is in there at all. You know, what does the world of digital technology have to do with an ultimate vision of conservation? And my answer is, everything. We wouldn't even have a science of ecology or a science of environmental studies or the ability to handle or model complex systems, to even understand what complex systems are, without computation and without complex digital models. Like it or not, it's the way that we have extended our imaginative capacity into the living world. Has it also produced these incredibly negative affordances of depersonalization, of increasing removal from the material world? Beyond a doubt. It's a great theme in science fiction, by the way, and I look to science fiction as a kind of antidote to the myopia of literary fiction that doesn't take the nonhuman seriously.

Sci-fi has always taken the nonhuman seriously in all its

guises, including the cybernetic, and I was thinking specifically of Greg Egan and a work of his where all of culture divides into the innies versus the outies; and the innies are perfectly happy going down into symbol space and living these virtual lives and waiting for the singularity and uploading their souls into these dynamic places which can become wildernesses again. They are completely untroubled by the replacement of materiality with virtuality; and the outies, of course, are horrified by that and want to continue outwards into the material world and all its complications and ramifications and look upon anything short of living fully embodied in the physical world as a betrayal of this incredible legacy. The thing is, both the innies and the outies depend upon computation, and that's the crux of this little two-edged sword that we've created in launching this digital evolution.

EM

A lot of the readers of the book seem to have been awakened not only to trees but to the urgency of the ecological crisis and are inspired to take action in some way. Was this something you wanted to achieve, and for those readers who are compelled to do something, what would you tell them?

RP

I'll say first that it's absolutely the most gratifying response that I can imagine getting to this book, or to any book, when a reader writes or says to me in person that they are looking at the living world around them in a different way. There is no better response to the book.

When a reader says, "I've been living on this street for twenty-five years, and passing this tree for a quarter of a century, and

only after reading your book have I been electrified to stop, and be present to, and discover what that thing is doing and the amazing, strange structures that it's producing throughout the year." To me that's like, what more could a writer possibly hope for than to hear from some reader that the story of the world has become more interesting to them? That journey was one that I, myself, made in writing the book.

The book took five and a half, six years to make. And I went from being a virtual tree illiterate to a person who will pull off randomly on the road when running a timely errand in order to stop and see something amazing. I would say, that with regard to the question of activism, there have already been cases in towns, in municipalities, in regions in this country and in other countries, where people have said that a collective action was given leverage by people reading the book. And the book encouraging ordinary, non-political people to take stands to protect the place where they live from the homogenizing processes of capitalism, that's deeply gratifying too. But I think it bears pointing out that short of chaining yourself to a bulldozer or joining radical protest movements out in the trenches, there is an important step of defiance and transformation and resistance that happens simply at the moment of committing to attentive plant consciousness.

It starts in this idea that your own vision of meaning has changed. Through awe, through fear, through humility, you have become someone who sees the need to return to community, and all other actions will follow from that. That initial first step—of saying, "The world is a living place, and I am not the lord and master of it"—is a necessary and sufficient

precondition for everything that follows.

And it's interesting, I got this figure from people who were writing about the broader climate movement. They have studied social transformations in the past, in particular, these kinds of things that have happened in the last few decades that would have surprised me profoundly if you had asked me to predict forty years ago. Like for instance, LGBT. Will there ever be same-sex marriage recognition in the United States? If you'd asked me that in 1980, 1990, even 2000, I would have said, "I sincerely doubt it."

From one year to the next, a long-standing, widespread movement of insistence and resistance tumbled into the mainstream. The people who study this say the threshold of that transformation—almost an Ovidian metamorphosis—happens at a much lower number than you think. You only need about 3.5 percent of a general population committed, ideologically, to the revolution in order to trigger that transformation where the ordinary mainstream person says, "Hey, that's right, I can do that. I'm with you on that."

We're going to hit 3.5 percent in this revolution of returning our species to the community of living things. The question will be how much suffering we will have to see along the way before we hit that number.

EM

Well, Richard, I think that's an apt place to end our interview. Thank you so much for the richness of your work and our conversation today. It's been a real pleasure.

RP

Thanks for the conversation. I've enjoyed it as well.