Nate Hagens (00:00:00):

Welcome to another episode of The Great Simplification. Today, I'm very pleased to welcome my friend and self-described renegade economist, Kate Raworth. Kate is known for her book, Doughnut Economics: Seven Ways to Think Like a 21st Century Economist, and the related lab that she co-founded, Doughnut Economics Action Lab, which is putting into practice the planetary boundaries and human sufficiency in the doughnut around the world. She's also a Senior Associate at Oxford University's Environmental Change Institute, as well as a Professor of Practice at Amsterdam University of Applied Sciences.

(00:00:46):

She's an incredible communicator, and I think her work on doughnut economics is painting a picture that people can understand that we are part of a broader system that we're influencing, and the current economic rules and institutions are not only creating environmental overshoot, but they're really not doing a great job for the humans. This was an incredible conversation. I hope to have Kate back on various reality round tables. She's doing very important work. Please welcome Kate Raworth. (00:01:21):

Kate, great to see you.

Kate Raworth (00:01:34):

It's great to be here.

Nate Hagens (00:01:36):

How are you?

Kate Raworth (00:01:36):

I'm well.

Nate Hagens (00:01:37):

You are very busy, I imagine.

Kate Raworth (00:01:39):

Yeah, I think everyone's busy, right? We can all make busy. But I'm well, and I'm really looking forward to this conversation, actually.

Nate Hagens (00:01:47):

Thank you for all the important work you're doing. Your book Doughnut Economics, and your ongoing work with Doughnut Economic Action Lab are influencing and inspiring a lot of people, so thank you.

(00:02:03):

Let me ask you a question. Many of us that worked in finance and economics had kind of a aha moment where we left the dark side. For me, it was 20 years ago on Wall Street reading Herman Daly's book. But you're a classically trained economist, now an ecological economist. What were some of your aha moments that caused you to pause and like wait a minute? Do you have any acute stories or memories?

Kate Raworth (00:02:34):

So, I studied economics at university in the 1990s. I had the, what's the opposite of an aha moment? It's like, "Oh no" moment. That kind of-

Nate Hagens (00:02:42):

Oh shit moment

Kate Raworth (00:02:42):

-oh no moment when, I've come to study economics because I care about the environment. There's no paper on the environment at all. There was nothing. It was like one week in public economics you know, a company pours chemical gloop in the river. That kind of that was it. When we talked about inequality, it always would begin with, taking initial income distribution as given, would this Pareto change, improve things? And I was like, "Why do we take in things as given? Why don't we start with asserting human rights?" So I had quite a lot of, "Oh no, this isn't turning out to be the toolkit I was really hoping it would be." Which is why when I left university, I didn't want to call myself an economist.

(00:03:21):

I actually walked away from it for many, many decades. But then, like many other people, I had those aha moments that started bringing me back. So one of the first ones was seeing the planetary boundaries diagram. I have it actually right here. It was seeded into my brain. I came back from maternity leave and somebody showed me this, and it was a massive, "Oh, that's the beginning of 21st century economics."

Because like you, I had just read Herman Daley's book Beyond Growth. That made my brain flip. And when I saw this picture in 2010, I was thinking, "Well, Bjorn Rockstrom, Will Stephan and the planetary boundary scientists, they have quantified that biosphere around the economy that Herman Daley drew. He conceptualized it, they quantified it, and we are game. We are on, here we go. And that's why I drew a circle within a circle and created the doughnut.

(00:04:13):

That was a massive aha moment for me. Somebody else then mentioned a couple years later, "Oh, well, of course the work of Donella Meadows, thinking in systems." I'm like, 'That sounds interesting. What's that?" Then when I read Thinking in Systems, it was a massive aha. There is no turning back from this. And why wasn't I taught economics, in systems thinking, why weren't we taught to think of the economy as a complex adaptive system in feedback loops?

(00:04:37):

So it was a real deep frustration with what I'd been taught, and just a thrill of finding these ideas. And it was this collective series of ahas that made me think, "I want to make these ideas dance on the same page." That's what led me to write Doughnut Economics. I want to see what happens when you bring Elinor Ostrom's commons theory together with Donella Meadow's thinking and systems, together with Herman Daley's ecological economics, together with feminist economics. What do we get next? So it was definitely these aha moments that brought me back.

Nate Hagens (00:05:07):

Why don't we teach thinking and systems and these planetary boundaries and some of the things you just mentioned to undergrads in college?

Kate Raworth (00:05:18):

Because the mainstream economic textbook and thinking and the ideology behind it is a self-contained, self-affirming system that has worked very well nicely, thank you, for decades, and carries on being taught. And students keep enrolling for economics, and I think there's a real inertia of self-questioning when inside the discipline, and why disrupt something that has apparently been working? I mean, to me, the most radical act in economics would be to draw Herman Daley's circle of the biosphere around every single model of the economy. Why don't we do that? Because actually it changes everything. And I think there's, it changes the professor's professionalism. It changes who is the expert here. It changes the foundations of analysis. So it causes a massive disruption in the hierarchies that have been built up around which are the best journals, which of the best frameworks, what's taken as given?

(00:06:18):

I mean, supply and demand curves, they haven't been peer reviewed. The exponential growth curve for an economy, that was never peer reviewed, but it's just taken as a foundational assumption now. So it's much harder to move away from that system because everything, every new paradigm, well, has it been peer reviewed? So I think that's why we see the buildup of new economic thinking often outside major economics departments because the new thinking is coming from elsewhere rather than within. (00:06:45):

But what thrills me is that students in high school, whether they're 14-year olds or whether they're 18-year olds, or whether they're undergraduates or master students, they know that the ideas that will serve them to be economists, household managers, right, planetary scale household managers of the future, they know that the ideas that will serve them are not the ones that are contained only those textbooks. They are coming to these new ideas.

Nate Hagens (00:07:09):

So I taught for eight years a class called Reality 101, and in my experience, the students that had never had an economics class immediately got the content in my class. But it was the ones that had had an economics class that there was this mental speed bump they had to get over on the assumptions and other things. It was very interesting to observe.

Kate Raworth (00:07:32):

Yeah, and there's a great quote from Kane. He said something like, "It's not the new ideas that are difficult. It's getting the old ones out of our heads that have been ramified into the corner of our minds. How do we escape paradigms?" So that, to me, is why I care most about, let's call it Econ 101. I care most about the first course that any student encounters. Often professors, when they're pushing back against what I'm doing, they say, "Oh, you're just talking about Econ 101." I mean, it gets far more sophisticated than this. I would argue, they don't suddenly bring the planet in when you're a master student or something. But the very first encounter we have with what is the economy, what is the range of its scope, what are the foundational metrics? Is it price in the market? What are the foundational institutions that we care about? (00:08:20):

These profoundly shape our worldviews, and pictures profoundly shape our worldviews. That's what I've really learned, the power of pictures. And so, if you want to dislodge a model, I think the best way is to propose a new model, right? Buckminster Fuller. You change things by making the old model obsolete, propose something new. So that's why the work I've done is really focused on proposing new pictures because the power of our visual sight, going into our visual cortex, it really shapes what we see and what we don't see, what's central, what's peripheral. So that's, to me, the most important economics course to change.

Nate Hagens (00:08:56):

Well, let's get into that. Your very popular book, Doughnut Economics, highlighted the outer core or the outer ring, which is the planetary boundaries that we don't want to exceed. And then the inner ring was the human needs for wellbeing, the things that we don't want to go below. And in it, talking about visuals and orthodox economics, you outlined a list of old economic thinking, like 20th century and new 21st century economics, and maybe you could either visually or we could put up one of your graphics, just give a kind of brief summary of the, I think you had seven points?

Kate Raworth (00:09:41):

Yeah. So first of all, let me say that it was really important to me, what I was aiming to do in that book was to set out ways of thinking, right? It's principles of thinking that

will then be adapted over time between different countries that will be relevant differently in Malawi or Sweden. But also, that'll change over time as suddenly AI appears or as crises hit. So I wasn't trying to say these are the policies that we should implement, but rather, what are some of the ways of thinking that will equip us to go well? And I'm sure there's many more, but yeah. Here's seven, and just for the fun of it with you, I'm going to see if I can show them quickly, visually. This is going to be kind of like a doughnut economics circus, big tent. So, let's see if I can do this. (00:10:21):

So, the seven ways to think. The first one, change the goal. The goal of 20th century economics was endless growth, right? There we go. Endless growth curve. It was just implicitly underlying everything that we said we were aiming for, success of the economy. No, that is not a sufficient statement of what success looks like, and we know that endless growth actually takes us into a lot of problems. So we need, here we go, the doughnut that you just described. A goal that says, "Leave no one falling short in the hole, but don't overshoot earth's limits." Get everybody over the social foundation inside the ecological ceiling. We want to meet the needs of all people within the means of the living planet. It's a goal that brings together human rights and ecological integrity. And I say, "Okay, that's the starting point on day one. Bang, this is where we begin." What kind of economic system will actually take us there? So, number one, change the goal.

(00:11:11):

Two, see the big picture, right? If that's the compass, what's the map? The map of economics. All mainstream economics courses start with this little diagram, supply and demand. Now, that's a big act. To put supply and demand on the screen on day one, it means we put the market at the center of our vision. It means we make price, the metric of concern, and everything else that falls outside the price contract gets called an externality. That's a big framing choice of the death of the living world. Oh, it's an environmental externality. That is not nearly a big enough picture. There are no externalities. As Herman Daley and others would say, "Your model's just not big enough." So I drew a diagram. Here's my embedded economy diagram. Here you go. (00:11:51):

Let's see if we can show this. So, this brings together ecological economics. It brings together complexity. It brings together feminist economics and commons thinking. The economy is embedded in society, is embedded in the living world. It is a subsystem and utterly dependent upon it. But also the economy is made up, not just of the market in the state, that very 20th century boxing match, the household, the space of unpaid caring work, typically done by women, and the commons and the Ostrom space where we co-create goods and services with value. If we start with this big picture of the economy and recognize that all economic activity has to operate within the planetary boundaries, and we can use these different forms of provisioning, to me, this is just so much a richer starting point for all macro economical modeling. So, number two, change. Get it, get the big picture.

(00:12:42):

Number three, nurture human nature. Who is humanity? How do we tell ourselves the story of who we are in this picture? The portrait of humanity in 20th century economics, this guy. Here we are, he's framed. This is a rationally economic man. I decided to draw him to make him visible. He would be a man standing alone, no dependence. He's got money in his hand, he's got ego in his heart, he's got a calculator in his head, and he'd had nature at his feet. He hates work, he loves luxury, he knows the price of everything. The real problem with this depiction is that the more the students' told, "Oh yes, this model is a sufficient model of us," actually, we start to mimic him. Students say over time they more value competition and self-interest over altruism and collaboration because they start to mimic the model. So who we tell ourselves we are shapes who we become.

(00:13:33):

Instead of this rational economic man, we need to recognize we are first the most social of all mammals. We are social or we are adaptable. We are heuristic. We care about other opinions, we follow the crowd. We are learning. So we have to start with the reality of humanity, which we learned from cognitive behavior, psychology from sociology, a much richer picture of humanity. Number four, we've got to get savvy with systems. So instead of assuming the economy is in equilibrium, like that supply and demand curve showed us, recognize that it's almost probably never going to be there. It's a complex adaptive system. For this, my favorite shape, little doughnut springs into

a complex adaptive system of interlinked dynamics. Reinforcing feedback, balancing feedback, tipping points, delay, resilience, redundancy. That's the world of Donella Meadows. So, think of it as a complex adaptive system that will ever be evolving. (00:14:29):

We can't control it, there's no levers to pull. The best we can hope for is to steward that system. So how do we want to steward that system? We want to steward it away from being deeply divisive. We've inherited a divisive economy that captures value and opportunity in the hands of a few. Here's the rise of the 1%. We need to turn it, steward that system into a much more distributive economy. There we go. (00:14:54):

A system that shares value and opportunity with all who co-created. How can we make a distributive economy? So from divisive to distributive. Second big dynamic that we can steward in this complex adaptive system is from linear and degenerative. Stick it in the pipe of production, make stuff, throw it away. That's what pushes us over planetary boundaries into a circular or cyclical regenerative economy where we use resources again and again, far more collectively, carefully, creatively, and slowly. So from degenerative to regenerative, from divisive to distributive.

(00:15:27):

And then this takes us to the seventh principle that, what is the future of economic growth? What does the future look like? And again, I'm kind of coming back to where we began. The presumption was economies would just keep growing forever. This says, "Well, maybe, actually, we need to be agnostic about growth because what we really want are regenerative economies and distributive economies." And there might come some point indeed, they probably have already come to it, especially in high income economies where they need to grow up, right?

(00:15:55):

Nothing in nature succeeds by growing forever. It grows, goes through a growth phase, and then it grows up and matures. What would it mean to create economies that actually mature? Because if we don't do that, we're going to get that. We are going to induce collapse, which is something very close to your heart and focus and thoughts, right? So how can we not break? How can we bend? How can we bend this system so that actually matures and grows up? So those are the seven ways to think, and let me

just say again, that's just seven. Those are the ones that became really clear and obvious to me. I bet there's more, and I offer people to keep adding to them.

Nate Hagens (00:16:31):
Bravo.

Kate Raworth (00:16:34):
That was fun.

Nate Hagens (00:16:34):

I might have to make this entire interview a best of clip. That was very impressive. Thank you so much for your work. While you were doing that, I wondered if you hadn't chose being an economist, you could have been like a standup comedian. And this stuff is not funny though, that's the problem, right? You have such a good delivery and are clearly very knowledgeable and passionate. But these are really serious topics that we need to pass the baton to our youth and people all around the world. And yeah, it feels good because we're on the right side of the ledger of humanity and the biosphere, but we're in a very tough moment.

(00:17:18):

And what you just described, I just fantasize about leaders, when Donella Meadows was working on these things in the '70s, had we adopted some of this thinking then, but we were in the thralls of massive energy surplus.

Kate Raworth (00:17:37):

Yes.

Nate Hagens (00:17:37):

The thing that I would add to your list is economics has focused on cost, not value. And energy for what we pay for it, just the cost of extraction, gives orders of magnitude more value to the human enterprise than its cost. That's a big flag in economic theory. So, what's been...

Kate Raworth (00:18:03):

I think, for me, what comes very clearly from your work is, and if I was to go back and add to, well, I wrote about a little bit, but more that the fundamental currency of our economies. If we really want to get down to currency and to valuation energy is, it's the second law of thermodynamics, it's the fundamental currency of life. And so, we would do a lot, we would do really well to pay a lot more attention to energy. Exactly as you just said, it's treated in economics as a cost, and it's, well, it's been very low. (00:18:33):

But actually, to understand energy and materiality, and I mean materials, the actual real materials of the world and the relationship between energy use and material use, and its boundedness and its relationship between that and the delicate balance of the ecosystems, the planetary boundaries, the life support systems of Earth. To understand the interrelatedness of those things, coming back to a point Satish Kumar often makes, how can you claim to be an economist if you don't yet understand ecology, the living world, the systems on which we depend, the cycles on which we depend, the materials at hand? It's a deeply physical and energy-based system.

Nate Hagens (00:19:11):

I've been using this new chart, I'll send it to you after we're done, a little triangle that shows politics, money, and technology as describing society. But then you blow up the screen, and that's just a little triangle on the top. And underneath it is this huge energy-like flame.

Kate Raworth (00:19:28):

Wow.

Nate Hagens (00:19:28):

And that's underpinning all that. And then you blow it up even further, and underneath that is the biosphere and the ecosystem services of earth that support all of that. So, I mean, what is the response from standard economists at your school, at Oxford or around the world? Are they ignoring this message from Doughnut Economics, or are they ridiculing it or, well, I mean, it just seems like so much obvious common sense. Or do they secretly agree with you, but the incentive structures of status and tenure and jobs preclude them from publicly agreeing with you?

Kate Raworth (00:20:09):

So, when my book first came out in 2017, there was a lot of ignore. That's the first line of defense, isn't it, right? If something's threatening, either ignore or kill. It's sort of... And so there's also some ridicule. Or the first comeback was, "This isn't economics. Oh, no." Now, you've put your values in here. You see, by starting with the doughnut, by starting with human rights and ecological, you started with your values, which astounded me. Made me think, wait, when you start with supply and demand of the market, do you think you are starting with no values? Do you not realize that everything is starting with a set of values of what we choose to show, what we choose to measure and what we choose to call success? But I have to say, there are, of course there are, well, the ecological economists started using it immediately because it brought a visual to what they and the inheritors of Herman Daley's work have been doing for decades.

(00:21:05):

Feminist economists, urban studies, so outside of economics departments, many, many other people started using business schools because business happens in the world, in the materiality of climate impacts and labor issues. So it made sense to them. And increasingly, there are people teaching economics in mainstream departments who more and more, I mean, I only find out about it when I find out about it, right? You only know what hear of. Who get in touch and say, "I'm introducing this into my macroeconomics class." Partly, I think, because there's a generation of students coming through who put up their hand and say, "What about planetary boundaries? What about the doughnut?" The demand is coming from the students. That's more and more where I see that it's come into economics departments because the student body are born in... The climate strikers are now at university, and I see that in the group of students I teach myself.

(00:21:54):

And so, they're coming with a much more political economy expectation of their education, and they're expecting to be taught tools that will actually equip them for the crisis that they've been born into. So they are pushing that agenda in a really positive way. But instead of trying to hammer on the door of economics departments that are shut, I've never done that, I go where the energy is, where the interest is,

because there's lots of it. And it's in other departments that are grounded in real world challenges.

(00:22:23):

Like I said, urban design, urban studies, architects, doctors, actually. Doctors who recognize human health and planetary health are deeply interwoven. They're bringing it into their degrees. So I'm just going with that energy. And I believe economics, it's a question to economics, is economics going to catch up and embed itself in the real world as other disciplines are doing? And then it will start bringing this in, as it is already creeping in.

Nate Hagens (00:22:47):

Personally, I don't think economics will ever voluntarily give up the throne. I think we'll have to have a crisis, and then new ideas that are laying around will replace the brittle and outdated 20th century models. Perhaps yours would be one of them. But I don't think they're going to say, "Yeah, you know what, Kate's right." That's just not the way of human status and metabolism, I don't think.

Kate Raworth (00:23:15):

I agree, but what I do know is they're going to be crises, and they're coming. And more and more that these crises come, and I think it's in part why the doughnut framework, oh yeah, there we are. This speaks to food prices and energy and climate impact, and it holds that space. But as you just, in passing, quoted Milton Friedman, right? "When crises come, people turn to the ideas that are lying around at the time." And I like to say, "Well, why just leave them lying around? Let's have them up and running." And that's why I co-founded Doughnut Economics Action Lab. Because when my book came out, what thrilled me was that I was approached by people who say, "I like the ideas and I want to do this." Some of them were teachers in schools. "I'm teaching this to the kids now. It's not in the syllabus, but this is what they should be learning." (00:23:58):

Some of them were city councilors, city mayors, state legislature. "We want to put this into practice where we are." So we work with them to start seeding this possibility. And what does it look like when they actually try and start putting these ideas into

practice so that as crises come, we can say... As of today, I can say there are 70 city and local state district governments around the world who've already chosen to start working with this model, to bring about the transition that they know they want to create. This seeds and grounds proof of practice of a concept so that as crises hit, it's got that credibility, it's got that critical mass of actual practical use.

Nate Hagens (00:24:37):

Yeah. So my podcast and my work is still mostly about educational, but you're actually taking doughnut economics, the book, the concepts, and putting them into practice in your lab. You just mentioned 70 communities, cities around the world. How are they putting them into practice? Can you give some example or progress updates or interesting stories?

Kate Raworth (00:25:03):

So I can give you an example, and those 70 are of local governments. There's a whole other group of community organizations starting it up, but local governments. So the way it, having watched it from, it began in April 2020 in the height of the Covid crisis, Amsterdam, we created a city portrait for them, down scaling the doughnut to the city. What would it mean for this city to aim to live in the doughnut? And they launched it in the midst of Covid because they said, "Well, we're in an emergency. We're in a crisis right now. But as we emerge from crisis, there will be funding. The economy will be opening up again."

(00:25:33):

It's that question, which direction are we going to go in, right? Don't waste the opportunity of a crisis to change your direction. They introduced it at the heart of their policy to become a circular city. So they said, they had a vision to create 100% circular by 2050, 50% circular by 2030, and they recognized that circularity doesn't just mean changing the flow of materials. It's not merely materials. It has deep implications for livelihoods, for skills, for distribution, for people's access to transport and food and clothing.

Kate Raworth (00:26:03):

So they wanted to bring the social in and that's why they saw the doughnut really help bring together the ecological and social in terms of a bigger vision of a circularity policy. And that was a good example of a place that already has a vision for transformation. Put it together with their vision to get rid of all fossil fuel transport in the city by 2030 so they're really transforming some big systems here. (00:26:27):

The doughnut serves as a visual clear compass that brings it all together. And so often that's the way I see it happening. It's not as if a city mayor sees the doughnut and, "Says, "Oh, that's an amazing idea, now what shall we do?" It's going to be seen by people in places who already have this sense of we need to transition, we need to transform our systems, our energy, our transport, our housing, our food systems. They come across the doughnut, this really helps bring together these ideas in a clear way that we can communicate. It's like a big sail on our ship, it's very compelling vision, and also we're joining others doing it.

(00:27:05):

I've just come back from Grenoble in France where the city have ... One of the most recent cities to say, "Yep we're adopting the doughnut" so they downscale it to the national level ... I mean, to the city level, and they actually collect the metrics. What would it mean for everybody here to thrive? And is our local ecology thriving? Do we have thriving nature in the city? Are we coming back within planetary boundaries? And what's our impact on people worldwide through global supply chains? And what kind of metrics could we collect so that this replaces for example, saying I'm making this stat up. But for example, they might say, "Oh, Grenoble's GDP has increased by 1.3% over the last year." I mean, is that good or bad or what? How will I know anything from that?

(00:27:46):

But if I'm measuring the metrics of a place in real terms, in terms of people's lives, in terms of the ecological health and its impact in the world, it's a real story and a much more detailed story about what's happening here. So they've introduced it. Like many cities, transforming their transport systems, getting ... Reducing cars, bringing in public transit, and much more cycling. They've introduced a tax on property actually because they say, "We have huge inequality in our city, we need to reduce the inequalities." So

this is quite an elected local government with pretty progressive mandate that are saying, "Yeah this helps us go in that direction." And just in terms of the kinds of actions that I see when I go to cities like Grenoble, like Barcelona, like Copenhagen ... What recurs to me, again and again, is a beautiful phrase that the environmental journalist George Monbiot once wrote. He wrote about the UK. He said, "Look, what we have here is private luxury and public squalor. And what we need is public luxury and private sufficiency."

(00:28:50):

And when I go to places like these cities I see, this is what public luxury looks like. Fantastic public parks, incredible mobility, low cost, fast, clean, efficient transport, good quality social housing, and we have private sufficiency. And in France, there's a word that's really gaining currency, sobriété. If you say sobriety in English people think "Oh, you're not going to drink alcohol anymore," it's got that very literal meaning. But sobriété in France means a dignified sense of I have enough, this is sufficient, my material needs are met. My mind and my intellectual life, and my cultural, and commons life is flourishing. Sobriété, it's really interesting to see the way this is gaining traction. In Sweden, they have a term lagom which means I have plenty and it's enough. And we need language like this in more and more cultures to be able to express that sense of private sufficiency and public luxury and that's where we should be seeking abundance. So again and again I see cities that are actually starting to put this into practice. That's the vision that they're starting to bring about.

Nate Hagens (00:29:54):

I love it. I have so many questions. Here's the challenge that I see. Last week I was in Germany and I spoke to a large audience of climate energy tech investors with the basic messages, we are not going to solve climate change and help the environment by growing the economy, by electric cars, and things like that. And I expected it to not go well but it went really well. This is a Donella Meadows thing. You can't understand our situation unless you look at the whole system. And the people in the room, I told them they were wearing three hats. One was their hat as the managers of the Sovereign Wealth Fund of Norway or Fidelity or whatever where they have to generate returns for their investors. The other hat was their father, mother, sister,

parents, whatever, they want to do the right thing for their family. And then the third thing is they want to do the right thing for the world as a citizen of the world. (00:30:57):

The challenge is that our prices, and our incentives, and our cultural aspirations are having them focus on that first hat where there is not a common plan of action where all three of those hats can align. And I would imagine that if we had better prices on non-renewable inputs if we had a complimentary metric to GDP because I think GDP does still have some uses, but if there was a wellbeing metric attached to it for context. Then suddenly all of your book and all of your seven points would scale massively. But until that happens the incentives and the prices that basically we just pay for the cost of extraction, not the cost of creation or pollution on our main goods are not going to allow communities, and cities, and nations is to embrace this writ large. What are your thoughts on that?

Kate Raworth (00:32:03):

I love those three hats. I think many people are realizing over time that those second and third hats, I want to be a good parent and I want to be good citizen of the world, these are coming much, much closer together. So I have 14-year-old twins, right? If I imagine what will the world be like when they are 80 or 90? I believe there's nothing I can do to protect them that doesn't actually involve protecting the world because we utterly depend upon a thriving world. So if you want to be a good parent you need to care for the whole world and system. As Janine Benyus always beautifully says, "A species, and a plant, or an animal can't be around for 10,000 generations so it takes care of the place that will take care of its offspring, and that's the best we can do." I completely agree that the incentives for the manager of a ... Well, Norway's Sovereign Wealth Fund, there's a lot of realigning to do there. But of any major corporate-designed company, the incentives are way off.

(00:33:03):

So just to come directly to your point about prices. Yes, the price incentives are way out. I would fix it not only through changing prices but this will also change prices through changing regulation. So I really believe ... I don't think you're advocating set the right price and the quantity will fix itself. I really like what Amsterdam are doing.

In 2020 they said, "In 10 years time, in 2030, there will be no fossil fuel vehicles in the city. No boats, no cars. You've got a long, loud legal message. It's very clear, this is the transformation that's happening." So nobody changed the price on that day but they changed all the signals. And, of course, that has knock-on effects of changing all the future expected price. So we need to put in place regulations that just remove life-destroying chemistry and introduce only life-friendly chemistry that just remove fossil fuel from the system and so that we put in that long, loud legal message that the system will start to adapt.

(00:33:57):

But I also want to come back to the point you say that the managers are not facing the right incentives. We can change the prices that they face, the incentives around them, we can also change the deep design of the organizations they work for and one more piece of puppet show. This to me is a really key one. And in fact, if I could go back and rewrite a section on economics this is one thing that I would bring up much more clearly, and it comes from the work of Marjorie Kelly who's a next generation enterprise designer working for the Democracy Collaborative in the US. Marjorie's book that I read, Regenerative ownership, she ... Or Owning Our Future it's called, she said, "You need to look at the deep design of an enterprise."

(00:34:42):

So here's the five deep design traits, right? What is the purpose of this enterprise? Why does it even exist? What is it in service of in the world? How does it network with its employees, its suppliers, its customers, its industry allies? What relationships does it hold? Does it see everybody else as a competitor or the allies in transformation? How is it governed? Who's at the table? Who has voice and decision-making? What are the metrics? How is it owned? By shareholders, by family for 300 years, by venture capital, by the workers, by the state? Because how it's owned is going to profoundly shape how it's financed, where that finance is coming from, and what therefore it's expecting or extracting or demanding. And so is the governor's ownership in finance going to be in line with maximizing returns to the owners, which is a very 20th-century corporate design, or is it actually going to be in line with serving the purpose which might be sequestering carbon building, community creating health."

(00:35:31):

So to me, if I was looking around that room I would say, "You're wearing a hat of the manager of the fund, and strapped to your body is a structural design that is informing what you can and can't do. What does and doesn't have materiality in your decision-making." In addition to prices. And how can we change these deep designs of institutions? At Doughnut Economics Action, now we're working with companies. Many companies come to us and say, "Oh, we want to do business in the doughnut." And we say, "Fine. We don't want to talk about the design of your products, I'm sure they're very nice. We don't want to talk about the design of that we want to talk about the design of your company because this is ultimately going to determine whether or not your company can become regenerative and distributive of the value it creates sharing that value with all those through the supply chain rather than maximizing returns to the owners, the shareholders, or not. Whether it's stuck in an old pattern. (00:36:24):

Because what we find when we talk to companies ... I'll give you one example. I was at a Circular Economy Conference last summer and somebody came up to me at the end and she said, "I'm" ... She worked for a major clothing company. She said, "I'm head of regenerative clothing and I've been asked to" ... Or the sustainability. "I've been asked to come up with a line of regenerative clothing for our company to signal we're part of this revolution but I'm being told I have to generate 15% profit returns" ... "Profit margins on it from the get-go, the standard." There's absolutely no room for this transformation. She said, "It's impossible, I cannot do it." So these companies want the regenerative label, the regenerative ... But they want the bottom line because of the way they're designed and owned and financed. We need to change that deep design.

Nate Hagens (00:37:11):

Okay, I'm with you on that except our entire edifice is supported by the one-time endowment of the carbon pulse. So I don't know in doughnut economics and the planetary boundaries ... It seems like we are avoiding exceeding nitrogen, CO2, biodiversity limits and that these communities are responding because they don't want to exceed those and they're making Grenoble, and those other places you talked about. How much of it is in response to not publicly aware yet but anticipated depletion of these energy helpers that we get annually the equivalent of 500 billion human laborers worth of energy that we're just pulling from the ground? Because as a

corporation that wants to make regenerative clothing and needs to make 15% a year, if you get these cheap fossil helpers that's going to help you meet your bottom line a lot easier. So how do we manage that? How does that fit into the story here?

Kate Raworth (00:38:22):

Well, as you said there's one of carbon pulse, it's got a pulse away, right? Whether it's through peak or whether the evident impacts in the world we need to let go of it. And that's the heart of your work, what happens next? I agree that ... So going back to the way economics is taught. We are not taught economics saying, "Here you are in an ecoms course in the early 21st century. By the way, you're studying economics at the end of a one-off massive carbon pulse which is created abnormal, temporary conditions. The most important of which is because of the availability of cheap energy it's given us phenomenal uplift of growth and we've come to think that was normal and we ... Right? We need to be aware that that was historic and that's not the future. How do we move away from that? That's why I think it's important to question growth. (00:39:17):

But I want to come back and question the design of the company. Because the way these companies are designed, they're designed on the presumption of growth and therefore the planet may be going to hand in a hand cup but I want my 15%. And that's still deeply written into the mindset. You know this coming out of the financial community, right? I want my high returns. And that hasn't modified at all in terms of the reality of what can actually be regenerated on a planet that isn't depending on extraordinary free cheap labor of fossil fuel but actually comes back within the regenerative capacity of renewable energies. To me, that's your question. Are we going to get this before it breaks us? Will we get this and learn to bend? (00:40:06):

And for me, part of the bending is bending in the design of institutions so we create companies that don't depend upon endless growth. That they understand that they may grow until they're mature in size and scale but then they can thrive. And they're not owned in ways that continually expect to extract surplus profit because it's not going to come. It needs to be reinvested in the enterprise which is invested in regenerating the world.

Nate Hagens (00:40:32):

You first need to understand it before you can do it so this is very important I think. One of my first podcast guests was Donella Meadows' husband, Dennis Meadows, and when asked what are some of the pathways forward he's like "One of the prerequisites is to extend the time horizons of institutions from quarterly or yearly to five years or 10 years or 20 years." So there's something that some friends of mine are working on called the Long-Term Stock Exchange which is to dually list current companies on this Long-Term Stock Exchange which makes decisions for all three hats that I mentioned earlier simultaneously. Because otherwise we're just in this short term, have to get the 15% now, and we can't look at the impact on the planet, and depletion, and these other things. Maybe that's one of the pathways.

Kate Raworth (00:41:34):

So I'm going to come back here. Whenever I hear an innovation like that I always ... I come back here and I think, which bit of this deep design of the enterprise or its environment are you therefore adapting? So if you've got the Long-Term Stock Exchange, is that going to influence ... How is that going to influence how the company's governed? If it's a shareholder and company you could have shares ... Different voting rights for shares that are held over decades or that you're committed to hold for many decades so that you give more voting to the long-term view than to the short-term view.

(00:42:10):

Other companies like Faith In Nature, a shampoo and beauty company, they recently put ... Literally, one of their 11 directors has become nature, they've put nature on the board because they said, "We kept asking what would nature do? Well, let's stop asking this as a sort of hypothetical question let's put nature on the board." So nature is represented by an environmental lawyer who says, "In bringing up naturally a long-term view because nature wants to be the infinite game and thrive forever. So what would nature vote for us to do on the board?" So all sorts of changes that go on between how the company's owned and governed, bringing in innovations like that, I think this is really where the future of enterprise design lies and what it depends upon. (00:42:53):

Because if we don't bring that longer term and wider thinking in terms of nature's interest, the supply chain's interest, the workers' interest, rather than it being dominated and owned by the interest of finance, then we're just stuck in a model that's just in service to finance and not in service to life. That essentially what fascinates me with your work is this ultimate question of what does it look like to design finance that's in service to life that actually finance, that could contribute to be and be part of a regenerative system? Because the financial system we've created is exponential and extractive and it's the antithesis of a living system.

Nate Hagens (00:43:33):

I fully agree. And the default trajectory is that the superorganism will eat the doughnut-

Kate Raworth (00:43:40):

For breakfast.

Nate Hagens (00:43:40):

Unless things change. The doughnut is your best-known diagram but you flashed one up earlier which I think is equally important is the embedded economy that replaces the circular flow of goods diagram. And in there you had the household and the commons. Could you unpack that a little bit? I mean, I assume the household you're talking about the care economy. Could you expand on the importance of that and why we need to include that in our metrics, et cetera going forward?

Kate Raworth (00:44:21):

So economy in society in the living world, the importance for me of dividing the economy up was because the very 20th-century economic debate and the debate between Milton Friedman and or Hayek and Keynes was very much about the relationship and the roles of the market and the state. And it's fascinating, but if you focus only on that you get this very 20th-century ideological boxing match. Your free market let's say fair capitalist or your state-loving socialist. And in that boxing match-

Nate Hagens (00:44:52):

As if those were the only two choices.

Kate Raworth (00:44:54):

Those are your only two choices, mate. It still goes on today. I mean, I find it extraordinary. Particularly in the US, I find if you critique the market, "Oh, oh, oh, so you're a communist." Is that it? And that's why I like to bring in new framing and not use that language, just speak in a different space. So the market in the state, of course, that's what shows up in GDP, that's the market output of the economy. But the way I think of these four sectors is they are four different ways, really useful ways each of them, that we provision for our needs and wants. So we can provision for our needs and wants through market-based exchange, through price-based exchange. Adam Smith was onto something, right? The market is an amazing mechanism with a lot of feedback loops through the price signal, sending messages to buyers and sellers of ... Who never need to meet. Who through that mechanism provide things that they want to supply and buy.

(00:45:49):

A couple of caveats. It only serves those who can pay the rest it ignores. And it only values what's priced the rest it exploits. So big caveats. Which is one of the reasons why we, obviously, need the state, the state provisions, public services, public goods for all whether it's ... Because it's a natural monopoly or because it's a human right so we need that. But this still leaves us in the market state dichotomy in marketed goods. Many other of our needs and wants are produced and provided through care, through unpaid caring work in the household where we all begin every day. It's the domain of the cooking, washing, cleaning, sweeping, raising the kids, teaching them to be good members of society. It makes-

Nate Hagens (00:46:32):

None of which is included in GDP.

Kate Raworth (00:46:33):

None of which, and yet which makes life work and it makes it worth it. And then the commons which Elin Ostrom brought from political science into economics and said, "Well, how people collaborate not through markets and not through the state, but as a

community, they come together and co-create goods and services that they value collectively." And this can work very, very well. Garrett Hardin said in the late 60s, "Oh the commons, it'll be" ... " It's a tragedy." And Elin Ostrom comes along and says, "Well, you riffed and sort of presume that the commons is a tragedy, I actually went and visited some, they actually work really well. Rice farmers in Nepal or fishermen in Maine. They actually managed to create rules that they follow together, collective discussions, there are punishments for breaking the rules. There are all sorts of codes in place that make the commons work."

(00:47:26):

I think all economics should begin with a classroom with 14-year-olds, teach them these ideas, and then just say, "Go out in the street. Go out in the street and just look around you, you'll see the market, you'll see the state, you'll see household care, you'll see the commons. You'll realize we are immersed in it all of the time and therefore each one of us is a producer and a consumer, we play a role in markets. We're a citizen and a resident, or your parents may be a public servant, they may be a doctor, or a teacher, or a bureaucrat. We're all immersed in households. What are you doing in the household and what's the politics of household care? Who's doing that work? And we're all commoners, we're part of a club, part of society." And we suddenly see a much fuller economic view of ourselves.

(00:48:13):

And then you can start talking about power because there's a power relationship across every one of these lines, the power between the market and the household. I know in the US I understand that women have how many weeks maternity leave before they have to come back for work? It's just like weeks. Whereas in Denmark it's parental leave, a year between both parents. Very different negotiations of that market household relationship. But power between the market and the state. Ronald Reagan famously told us to roll back the state get out of the way, Margaret Thatcher did the same, and I think we're seeing a lot of the consequences of this. Market fundamentalism and markets crushing out the commons, market society. Often people say we live in a market society. And then are we now marketizing our relationship with the living one? That's one of my concerns about bringing very market- based economic

language of natural capital accounting or ecosystem valuation to the living world. There's relationships, power relationships across all of these lines. (00:49:09):

And the last thing I'll say on this diagram. One of the most interesting things is when you think about economic provisioning that happens across these. The state and the commons, the state commons partnerships, how can the state be a good partner to the commons? How can the state support the household with childcare centers, for example? How can the market and the commons, you can have platform cooperatives, right, so you can have a commons platform and then people can run small market-based enterprises on that commons. Some of the most interesting economic innovations in economies are happening at the intersections of these. And if you don't start by seeing all of them you'll miss it, and you'll miss out that space of innovation. (00:49:48):

This is a base map. If the doughnut is the compass, the embedded economy diagram is the base map. It's a real tribute to Herman Daly it says. Whenever you see a diagram of economy you got to draw the living world around it and say, "This is a closed system and this is an open subsystem, deal with it. Create finance and create economic systems that actually thrive within the dynamics of the living world."

Nate Hagens (00:50:14):

Are you teaching right now or are you full-time with Doughnut Economics Action Lab and et cetera?

Kate Raworth (00:50:20):

I do teach a little bit in one course in Oxford. Through Doughnut Economics Action I'm through teaching in Oxford. Now, let me rewind back. Two days after Herman Daly died I was giving a lecture on the critiques of mainstream economics and new economics, and some students rushed up to me afterwards and they just said, "Why aren't all first-year economic students taught these ideas?" And there was this real frustration and I just felt it. It was because Herman Daly had just died and just this damn, the batten's really been passed to this generation now. So I just thought, why the heck isn't it not?

(00:50:53):

I live in Oxford, I happened to live in Oxford, I moved here 20 years ago to work for Oxfam and here I am. So my local university, Oxford University, and I teach there. And I thought right, I'm going to put on a course that's open to all students who come to the city of Oxford whether Oxford University or Oxford Brookes University, there are two universities here, to study economics in any kind. And it's free, and it's on and it was at night, and it was student-organized, and it was fantastic. And we had 200 students do the whole thing throughout eight weeks.

(00:51:20):

Now, the reason I did it here in Oxford was to develop the materials that I now want to turn into a course that we can share online with everybody. And this is my work at Doughnut Economics Action Lab. The real question of Doughnut Economics Action Lab is how can we put these ideas in the commons? I've now put all the ideas, I've done economics in the Commons, and we share them, and we've turned them into tools for cities, and tools for communities, and tools for business. As commoners we ask that people share back their learning and their innovation because that's what means we collectively learn. But part of this is, the future that we plan is to provide more training, provide more courses, and provide the material to those courses so that other teachers can then say, "Great slide deck, thank you very"-

Kate Raworth (00:52:03):

The materials of those courses so that other teachers can then say, great slide deck. Thank you very much. And now I'm going to go and teach that so that it spreads and scales. To me, always the question is, how do we help these ideas spread and scale at the speed that these times demand? And how do you do that with an openness of sharing but also an integrity, making sure the ideas don't get green washed along the way? And so it's continually balancing that openness and integrity, and that's why we're an action lab, actually. It's all about putting ideas into action.

(00:52:26):

And is a lab because the way we are aiming to do it, what we are learning along the way, as well, how to design these commons well so that they retain integrity, but that they can spread as fast as possible. And I invite anybody listening to this to come and

check out what we're doing. It's doughnuteconomics.org. You can see our platform, you can join, you can browse, you can use the tools. Please be a good commoner. If you use the tools, share back, because we know that the peer-to-peer inspiration, when a mayor says, "I'm using this tool in our city," that's just massive inspiration. (00:52:57):

It has directly traceable impacts on other mayors and councilors elsewhere who then get the inspiration but also somehow get the permission, it's time to move. Let's go. They're going, Amsterdam's going, Copenhagen, Brussels, Barcelona and Grenoble. It's time to go, Ipoh in Malaysia, Saldanha Bay in South Africa. We're on the move.

Nate Hagens (00:53:16):

If I had taken your class, if I had been one of those 200 when I was 18 years old, it would've completely transformed my entire life.

Kate Raworth (00:53:26):

Well, I think if I had taken Reality 101 with you and in many students it would transform many, many lives. And I think these are the foundational courses that a lot of students, again, as I said, born into climate crisis, born into an era of awareness of global north-south, Black Lives Matter and born into a much more critical awareness of the inequities thrown up by the systems we've created. They are looking for these tools that will help them transform the future and the very least steer through the future that they know. Crisis is coming and we need resilience.

(00:53:56):

So yes, let's spread these ideas through podcast and through online courses to make them available as possible. I get no greater thrill than when a teacher writes to me on Twitter and says, "I'm using these ideas and I'm teaching them in my classroom." It's like, go. Let's go team. This is big teamwork. And we create a big team when we share and feedback and that lovely feeling of I'm part of a really big team and I don't even know the names of all my teammates, but we're doing this together.

Nate Hagens (00:54:22):

Well, you're part of the right team. That's even more important on behalf of nature and the future. If I can help you in any way on that. Obviously we're doing this podcast, but let's continue talking offline.

Kate Raworth (00:54:35):

Yes.

Nate Hagens (00:54:35):

Because I think what you're doing is so important. You just mentioned inequalities. I know that wealth inequality is something that you often talk about. It seems that income and wealth inequality are incompatible with what you envision to be a successful doughnut economy. Do you think that ecologically and bio physically responsible societies need to go hand in hand with a more materially equitable societies and why?

Kate Raworth (00:55:11):

Yes, definitely. Here's the doughnut. Here's the overshooting and shortfall donut. So all the red in the middle is the extent to which people worldwide are falling short on essential needs and the outside is the extent to which we're overshooting planetary boundaries. Actually it's been updated and the 2022 data would show even more red here, we're overshooting even more.

(00:55:34):

The scale of inequality in the world is just gob smacking. The richest 1% of people own half of the world's wealth. I can't actually in my head hold that as what the scale of inequalities that has. There's no way we can meet the needs of all people within the means of the planetary boundaries in inequality because we need a massive redistribution of resources and access to resource for all these people who literally don't have food, health, education, housing, transport. We need to see the most economic growth and the most wellbeing growth in the lowest income countries. That's where I absolutely believe that economies, if we measure them in traditional way, GDP, they will grow. Malawi, people there live on an average one and a half thousand dollars per person per year. Massive human shortfall. We need to see that growth. (00:56:27):

And the only way that that's going to be possible within planetary limits is for those who have very large material footprints now, which are very heavily coupled with high incomes, to combat within planetary boundaries. So creating a far more equitable world globally and also within nations is an essential part of making it even feasible to think about coming with planetary boundaries. So yes, they have to be brought together. And many people I know when they talk about the concept of a regenerative economy would say, "Well, a far more equitably distributed economy is part of that." A regenerative system cannot thrive and continue if it's deeply unequal. And I would agree.

(00:57:08):

The reason in my book and in these seven principles, I pulled them out. I said, I want to just distinguish between or highlight that as well as from degenerative to regenerative, from divisive to distributive. Because I came working at Oxfam for a decade. I came very much from a social justice background. And it's really important that the redistributional intention or the pre distributional intention is very, very clear. And I think sometimes when some people hear regenerative and they think, oh, that's just environmental or just ecological. It's really important to say, hang on, we are rebalancing both the ecological imbalances and the social imbalances. And they have to happen together.

(00:57:47):

So yes, crucial. And it goes back to that lovely phrase from George Monbiot, public luxury, it's accessible to all and private sufficiency. That is very much a redistributional agenda that would achieve that.

Nate Hagens (00:58:02):

I think we evolved with material equality because we didn't have any energy surplus. And now this energy carbon pulse has created this just series of multiple scale power laws. Let me ask you this. Do we need to change the prices and the cultural aspirations before such a wealth transfer would take place? Because if we keep the same GDP as our goal, prices are at the cost of extraction, not their real value, and we do a simultaneous wealth transfer within countries and between countries to the

global south, wouldn't that in its itself actually accelerate some of the exceedings of the planetary boundaries?

Kate Raworth (00:58:57):

I think so. I think, instead of thinking in terms of prices, I was thinking in terms of the actual, that's why I preferred thinking in terms of the regulation of saying we are going to eliminate the use of fossil fuels here. Whether it's the car or transforming, insulating our homes and moving away from fossil fuel to renewable energy so that we just bring down that intensive use of fossil fuels and make available the remaining carbon budget to other countries that have massively underused theirs.

Nate Hagens (00:59:30):

So let me ask a follow-up question there. There's a lot of built infrastructure and momentum and sunk cost in the global north. Is it possibly more likely that a culture, a community, a region to truly live like doughnut economics, minimum human needs and don't exceed planetary boundaries in the global south, in areas that don't have all this infrastructure and sunk cost of expectations in institutions? Would be easier to start this in Kenya or somewhere? I'm just asking.

Kate Raworth (01:00:21):

Yeah, and I think it's a really, really valid question. I think there are two things pulling in different directions. There is not the sunk cost. There's not the sunk infrastructural structure that's been put in place. You haven't got the intensive road-based culture that say North America has been locked into. In the same way that they've jumped from no phones to mobile phones, from no banking to e-banking, they jumped all those institutions in between. So yes, when there's no infrastructural in place, you can jump to a far better solution. And that must be why the global north and the world makes available resources to invest in renewable energy so they jump into renewable energy solution.

(01:01:06):

So on the one hand, you've got the lack of inherited infrastructure as a barrier. But of course the other side of it is high income countries have so much wealth and resources and technology and skilled people. So they've got the accumulation of wealth in

resources that they can either convert or they can use that skill and the institutional structures that enable that to happen. So the idea of saying, oh, this is much easier for Kenya or Malawi, they're on incredibly low incomes and it would only be easier if we have the transfers that need to happen from the global north to the global south due to historic responsibilities for climate and other ecological resource use that should be happening.

(01:01:49):

I think of countries in kind of three clusters heading towards the doughnut. There are the low income countries that, like the ones we've just been mentioning, that need to meet the needs of all people for the first time without overshooting planetary boundaries in the way that countries before them have done. And that's never been done before. There's middle income nations like China and Iran and Mexico and Russia that need to meet people's needs for the first time while already coming back within planetary boundaries. That's never been done before either. And then there's the high income nations that are in massive, all high income nations are overshooting planetary boundaries. If I showed you their national doughnuts, they're like big red overshoot.

(01:02:25):

So first of all, next time you catch or I catch anybody here or find ourselves saying, developed countries, advanced nations. Like, hang on. What are you talking about? Because there's absolutely nothing advanced or developed about overshooting planetary boundaries. So we should be reframing our language. But these nations need to reduce and come back within planetary boundaries, not just on carbon, big one. But also on water use, land use, material use all of those planetary boundaries, coming back within while finally meeting people's needs for the first time, which they definitely have the resources to. And that is an unprecedented pathway too. So every nation is on a pathway of transformation. None of it's been done before. Some have the advantage of wealth, some have the advantage of not being locked in to existing infrastructure. And some I think, many of the emerging economies, they're in the middle of those big infrastructural investments and this is the critical time to get it right. And of course, I think one of the dangers is the fossil fuel industry, when they find themselves being closed in the global north, the real risk is that they then go and

sell their wares to the lower income countries and get them locked in. And how do we avoid them getting that lock in instead moving to the renewable energy future that will actually power them and enable them not to get locked into endless growth. They need to grow now but not get locked into institutions that drive them to endlessly.

Nate Hagens (01:03:46):

So what is the correct term, developed world that's creating global eco side or the global north? What is the acceptable term? Have you come up with something?

Kate Raworth (01:03:56):

Well, I call it, yeah, I use just very factual language of high income, middle income and low income because I'm just describing their income levels. But I think we really need new language because the more that we find ourselves saying, even if people say developed nations, but you know what I mean by that. But it still just keeps creating this idea that that's the aspiration and others should get there. And I find it very powerful when I show national doughnut diagrams to countries like Norway. You mentioned Norway, where people are holding Norway up. In Norway wonderful life, high income, great quality of air, and you can swim in the harbor. What's not to like? Norway has a massive ecological overshoot like all high income nations. And when you show them these images and that high income countries are very far from living the doughnut. Costa Rica is much closer than any other nation.

(01:04:42):

There's a real jaw drop moment actually. And I've seen it visibly on the face of officials of nations who used to being considered the top of the ranking. And actually it really repositions and there's a humility that kicks in. There's that ah-ha, or maybe it's an oh dear, or gosh, look at us moment that we need of humility and ambition of we too need to deeply transform. And last century's economic theories, were not designed to solve this, so we really shouldn't be expecting them to deliver on this. We need new theories, new textbooks, new courses, new ideas, new policies to get us there.

Nate Hagens (01:05:17):

I just saw a graph this morning, which is another sort of ah-ha that Norway is probably the most successful nation in the world on scaling electric vehicles, but their

oil use is going up. So the addition of electric vehicles replacing internal combustion vehicles has not reduced their oil consumption.

Kate Raworth (01:05:39):

Is it their domestic oil consumption now because I know they're a massive oil producer and selling oil to others. Or even domestic oil consumption.

Nate Hagens (01:05:46):

No, the domestic consumption. Yeah. I'll send you the chart. So here's a question, Kate. And this gets to the competition versus cooperation game theory dynamics of the world. But if a country or a city or a region chose to, we're going to live in the doughnut. We're going to follow this. From an energy surplus, power, money, potential optionality on doing things in the world, they will be temporarily at least out competed by those nations that continue to maximize profits because those profits can be spent on things that either militarily or technologically will cause that first few nations or communities to be out competed. Not in the long run because in the long run it's a tortoise and hare sort of thing, and the tortoise we know ends up winning the race. But in the short run, they'll be out competed. Isn't that an inherent blockage to wide scale adherence of these ideas? What do you think about that?

Kate Raworth (01:07:10):

Yeah, really important point. So let me start at the level of the city. When cities actually start aiming to do this, I think they might not have grow, grow, grow the city. And many city policymakers say, that's not our goal. That's not what we judge as success for our city to get bigger, to bring in more and more big companies, to expand, have more and more housing. People are creating cities that are great places to live, where you can move quickly, where the air is clean, where there are good schools for kids, where there's nature, where you feel you won't be hit by a heat wave in the summer.

(01:07:46):

These are all qualities of living in the doughnut, where there's a strong community, there's public luxury. This brings people in. I mean, these city, Grenoble as an example, people are moving to Grenoble. It's seen as a, actually that's a really desirable place

to live. So the city scale, I think actually it's a signal especially for industries where people can work remotely and parents as they can have their parental hat and their work hat, and I can actually be around for my kids and I can reconnect and I want to raise kids here, it crowds people in. Now when you go to the national level-

Nate Hagens (01:08:20):

So we need those bold civic leaders to go in this direction to then act as pilots of success living this way?

Kate Raworth (01:08:29):

Yes. Yes. And I'm not surprised that it's cities starting. Cities are more sites of experiment and courage to start moving. And I think nations are going, I'm hoping, and I'm expecting nations are starting to look at what's happening in cities and saying, actually this is the seeds of proof of concept and can we start doing this national? But this point you just raised I think is a really big one. And when we say, okay, we need to move away from growth dependency, the question becomes how are economies currently structurally dependent upon endless growth? And there are at least eight ways, right? There's four financial ways companies pursue maximum returns for their shareholders that drives growth. Commercial banks create money as interest bearing debt, that drives growth. If the economy's not growing, but companies are still chasing labor productivity that creates unemployment. So you need growth to absorb the unemployment.

(01:09:26):

On the other side, social lock-ins, right? People still after a hundred years of propaganda, thank you very much Edward Bernays for, he succeeded convincing us that the way we will improve ourselves as to buy something more. So there's that kind of consumerism. Having a growing economy helps avoid the ultimate redistributional question. And so it avoids actually having to tackle redistribution.

(01:09:52):

But one of them, a really important social lock into growth. And it's a kind of geopolitical lock into growth as you just mentioned, I look at the G20 photo that's taken every year, and I think, well, no leader wants their country to lose their place in

that G20 family photo. But if one of those nations amongst them said, we're no longer going to pursue growth, we're going to pursue a resilient national economy. Well, there is, particularly in the current atmosphere in the world, there is the geopolitical military question of geopolitical power and military power and resilience against threats. (01:10:25):

And I think the, European countries coming together and creating a region is one very good example of how countries, individual countries can overcome that by saying, well, together we are stronger, we stand so that we don't individually all have to keep growing, but we, the size of us together. But to me, this is one of the very most challenging lock-ins to structural dependency on growth. And I don't think the solution is an economic question, I think it's a political international relations question. And just as much as I would love these ideas to be taught in economics department, I don't think every student studying macroeconomics should absolutely be encountering a macroeconomics course in post growth thinking.

(01:11:09):

I think all schools of government should be introducing their students to questions of how can we create, think about geopolitical power and power dynamics and relations and international relations in a post growth context. Because you've just pointed out one of the most critical collective action problems we have. Why are schools of government not grappling with this head on? I think they're too much influence by schools of economics that again, thanks to that one-time, power pulse from fossil fuels assume that growth is the norm. And so we do international relations in the context of assuming growth is the norm for all nations. I think it's time to move on.

Nate Hagens (01:11:45):

I think on one of our one-on-one calls, I think I told you this story, but in the last 10 or 15 years, when I'm talking to high level government people around the world, almost all of them were either themselves or directly flanked by a PhD in economics or finance like everyone. And it's like they're the gatekeeper to the politician. So it makes these things hard and there's like a glass ceiling of what can be discussed at those levels. Except you were highlighted last month at a Beyond Growth Conference, which

the head of the EU Commission president started out. That must have been a proud moment for you to highlight such an amazing thing at the European Commission. Yes?

Kate Raworth (01:12:40):

Yeah. So the group of MEPs in Europe organized the Beyond Growth Conference in the European Parliament, and it was opened by Ursula von der Leyen, and it was impressive to see her there. I say it was really important to see her there and to see her saying, I think she said fossil fuel based growth is in the past and it's got-

Nate Hagens (01:13:03):

Yeah, she didn't say just growth.

Kate Raworth (01:13:04):

No.

Nate Hagens (01:13:04):

She said fossil fuel-based growth.

Kate Raworth (01:13:06):

Yeah, it's still a win. But the fact that she came to a conference and stood on a platform where it said very large letters behind her Beyond Growth, that's very different from 10 years ago. And it was really important that that conference happened. And many excellent post growth thinkers across Europe, de-growth post growth, donate economics, wellbeing economies were there and talking about what does it mean? And in indeed, not just Europe from around the world, really starting to dig into what does it mean in terms of the metrics, in terms of the macroeconomic policies, in terms of the labor transition, in terms of business design, showing that there is a whole other form of economic thinking emerging and ready to be taken far more seriously. So I think it was very, very important that that happened in the European Parliament.

(01:13:53):

And again, I was delighted to be presenting the ideas of doughnut economics there and talking about using these metrics because I could point to so many pretty major

cities in Europe, Brussels, the city capital region of Brussels itself, Barcelona, where am I trying to say? Amsterdam, Copenhagen, Tomelilla in Sweden and more and more. Bad Hönningen in Germany, some pretty big European cities are saying, yeah, we are choosing this, the doughnut framework as our own new metric. So again, it's from the city and regional level that I know it brings it currency and credibility and recognition within European Commission.

(01:14:38):

And actually there's been, within the European Commission, there's a group of civil servants within there who for the last, at least three years from just before COVID, they created a group called Doughnut for EU. And they within different European commission and European Union institutions started saying, we want to bring this language. And for me it's a win. You don't need to see the diagram of the doughnut. You don't need to hear the word doughnut. Whenever I hear a policy maker saying, we are aiming for wellbeing or living well within planetary boundaries or limits or within the means of the planet, to me the word within is a radical word because you, again, you're hearing it's the economy within the biosphere. So every time I hear a policy maker speak to a vision of wellbeing within the planet, you think, hallelujah. We are into a new paradigm with that one little word, we're in a new space.

Nate Hagens (01:15:31):

So one of my addictions is unfortunately buying URLs that I might someday use, and one of them I bought 10 years ago was live within.org and it's just-

Kate Raworth (01:15:40):

Oh, you're on it, Nate, you're on it.

Nate Hagens (01:15:43):

I keep renewing it. I haven't had time. Speaking of time, how the hell do you manage all this? You were like the de-growth energizer bunny. I mean, do you come up with all these graphical tools yourself, or do you have a professional PR toolmaker or are these your ideas?

Kate Raworth (01:16:02):

Are you saying, did I pay somebody to make these bits of cardboard for me?

Nate Hagens (01:16:06):

Well, no, I meant the ideas like I want a graphical tool.

Kate Raworth (01:16:13):

Okay. So when Doughnut Economics came out, the thrilling thing for me was the number of people, as I said, who came up and said, love the ideas, and I want to do this. I'm a town counselor, I'm a teacher, I'm a startup founder, I'm a community organizer. So that's why I set up together with a team Doughnut Economics Action Lab. We are a remote team. There are 12 of us working across different countries, and together we are creating these tools. So we knew right from the beginning that cities would say, what would it mean to do the doughnut on the city?

(01:16:46):

So we created a tool, came up with a kind of conceptual framework that we make as a canvas, meaning it's something you can put on the table and you can literally put things on it, make it very visual, very tactile, and no equations in sight. We don't need equations for this. It's a worldview reframing activity. And we do it in person and you can do it online so everything we do, because we are a remote organization, it really helps us think remotely. And we make all of our tools available on Miro and online so that we can run web.

(01:17:16):

For example, the government of Bhutan got in touch and they said, you know what? The concept of gross national happiness, which guides us, it's actually got a lot in common with the doughnut. We want to see what happens when we work together with the two concepts. And we ran some webinars for a hundred civil servants of Bhutan online to share these tools with them.

(01:17:35):

So I'm working with a team of 12 people who, I have to say one of the best things for me, going from working alone, when my book came out and the interest that was coming, it was almost bouncing off me because there was nothing I personally could do with it. But now there's a team. I say, you're a mayor and you don't want to talk

about cities. Let me introduce you to my colleague Lenora, she's our cities lead. You want to talk about business, you want to talk to Erinch Sahan. You want to talk about communities, meet Rob. Talk about education, meet Carolina. We've got this wonderful team of people who are running with

Kate Raworth (01:18:04):

each of these and bringing practitioners together in a community and conversation of peer learning groups. So it's a thrill for me in setting up an organization and a team with my co-founder, Carlota Sanz, setting up this team to say, how can we make this work distributive? Just like this ball, right at the beginning it was all coming at me, and this is just like, "I can't cope with all this." But let's distribute it across our team, but also across the community.

(01:18:59):

Of course I'm working too hard and running too much, like many, many people. And personally you think this is at risk of running me down and the times are urgent and the crisis is now. And because of the crises that are hitting in the world, more and more people are suddenly waking up and looking around for those ideas that are lying around. So how do we make sure that they're really visible, really accessible? And yes, these are very serious issues, but how can we make them irresistible? Because what the last thing you want is people to say, "You know what? This is just too complex, too overwhelming. I find it depressing and overwhelming. I'm just going to switch off from it."

(01:19:38):

I want people to say, "That looks energizing, inspiring. I want to be part of it and then to lean in." And that's why I aim to make it playful. Well, actually, I just also like having fun. Hell, let's have fun while we're on this team. It's got to be the most fun place to work. It's got to be the funnest project to do rather than just extracting from the world, let's repair the world and have fun while we do it. So it's the team at Doughnut Economics Action Lab and the community of over 10,000 people who've joined our website and our platform. And it's just I get any energy from every time somebody comes and says, "Oh yeah, I'm using this in my town. I'm teaching this in my classroom. I've used this in my class." It's amazingly energizing because we can see all

the challenges in the world. And yet time and time again, you see people, the opposite is happening and it's not publicly visible all the time, but it's rising, it's bubbling, it's rising, and I'm just going to lean all my energy I have into helping keep that rising.

Nate Hagens (01:20:31):

Well, congratulations with just 12 people, you are punching way above your weight on the impact of sharing these stories with other people. By the way, last week I was traveling and I saw signs. There is already a National Doughnut Day, which in the United States, people actually just eat doughnuts. So I'm very happy there will be this International Doughnut Day around with our planetary boundaries. One final question before I get to the closing questions. So you were at this Beyond Growth Conference. You and I have talked about this before. I often state that de-growth is what we should do because of global inequality and because of resource and climate limits, but the metabolism of the system won't allow that. So we will hit a wall and then bend, hopefully not break. So de-growth is what we should do, but post growth is what we're going to have to do. So the way I see it is there's two tasks here. One is to describe and flesh out and advocate for what a sustainable, desirable society might look like with the governance and the commons and the care economy and everything you've stated. And then how do we get from here to there, which is as are related, but distinctly separate question. Do you have any thoughts on that dichotomy?

Kate Raworth (01:22:00):

So definitely spelling out the vision of where we want to get to. And I really appreciated that you said that earlier on. I said it's, "Easier said than done." You said, "Yeah, but it's really important to say it." If so, we have a vision of it. And that is where I've placed my energy. And again, in this big teamwork, that's the role I've focused on playing of how can the Doughnut acts as a vision of where we want to get to and it's an aspirational positive vision. And then setting out some of the fundamental diagrams and the principles that would be part of an economy that's got there. And then there's a question of, okay, if we do keep going, if we fail to turn and keep accelerating at the wall, will we bend or break?

(01:22:42):

I would say that I think the de-growth community, as I understand it, they would say when you say, "Can we bend, not break?" I mean they would say, de-growth is the aim to bend. That's what people in the de-growth community mean by a just reduction of consumption and production of less necessary things to come back within planetary boundaries in a democratic way. That is a beautiful vision of a bend. But I hear you are saying, "Well, if we don't bend in time, then we're going to hit crisis. And it's going to be through shocks and through subsystems collapsing that we're going to be forced into a post growth future."

(01:23:19):

Just one reflection I'll have on that, and I'm not saying having set out how to get there, I do think we need a positive vision of what we're still aiming for. I think really key to that is looking at going back to what are the structural dependencies on growth and how do we remove them? Doing that work now gives us the best chance to survive an era in which growth doesn't come.

(01:23:43):

And that's why I think it's really an ethical obligation on economists to look at this, the radical uncertainty of the future and the existential challenges of what happens if the growth based thinking gets it wrong, I think puts a huge ethical obligation on looking at alternative futures. But if I come back and think, well, what if we find out that we if we break, we don't bend well, we will find we are actually spending much of the century continually outside of planetary boundaries and people falling short. And the more that we stay out here, the more that these crises are going to hit, the more the shocks are going to hit us. And the first time I asked myself, "What if it turns out that much of the 21st century is going to be lived outside of these boundaries and continue to be? So does that change the goal?"

(01:24:35):

It didn't make me move away fundamentally from saying that the goal is still to come back to the Doughnut. The goal still to be the as resilient as we can, is to create systems that provision essentially for people's needs and do everything we can to combat. Every inch here matters. Every inch matters the closer we come to coming back within those boundaries. So it didn't dislodge for me the value of this way of thinking, and I would love it to be dislodged.

(01:25:05):

And can I just add a comment here, which is the Doughnut may have come after our common future, the Brundtland Commission and that definition of sustainability, and then we get footprints and then the long comes a Doughnut, and I'm very aware it stands in a line of thinking. And whenever I teach it, I always say to students, "And then what next?" It's not an endpoint, it's a point along the way. Our thinking is evolving. More people are coming saying, "I want to create something more biocentric, more nature centered. What would that look like?" So I look forward also to the day that the Doughnut framework has been superseded because we've moved beyond it because there's a generation rising who instead of seeing the Doughnut saying, "Wow, I've been waiting my whole life to see that." A 50-year-old might say that. "Yes, I've always thought like this." A 20-year-old, you show them the Doughnut and they go, "Yeah, I get it. Come on. And? Go further." They're born into that expectation. It's quite thrilling to see that and think what are they going to create? What's coming next?

Nate Hagens (01:26:04):

Well, you've done such important work on the Overton window of just thinking about how a new economy might be. I almost think that, and we've talked about this before, that I'm trying to work on something called advanced policy, which is those things we're going to need to do in the future that are politically and socially too strange and forward to be accepted today. But if there was a Doughnut break glass in case of emergency blueprint that all governments, city, county, national had a rule of a principles and then what to do once we're in this situation, but based on some of the core seven things that you laid out, I think that might be kind of interesting.

Kate Raworth (01:26:54):
I like that.

Nate Hagens (01:26:55):
Yeah. Yeah.

Kate Raworth (01:26:58):

First rule is please break the glass now and use the Doughnut now. Don't leave it. Don't leave sitting in the cabinet until the crisis hits.

Nate Hagens (01:27:06):

At its core, and you mentioned Elinor Ostrom a couple times, at its core, I think we face a crisis of governance because our governments were not created or the institutions for this sort of a world, and we're just stuck in our ways looking at old forms of governance and institutional thinking. So I mean, I think education is the first central point and this is great.

(01:27:37):

So I have some closing questions, Kate, that I ask all my guests if you have a few more minutes. So more broadly, beyond your books, your teaching and the Doughnut Economics Action Lab, you've thought about since the nineties when you had your aha moment and you left the dark side as it were, these issues as a career choice. Do you have any advice just to the listeners or watchers of this program at this time of global poly crisis?

Kate Raworth (01:28:12):

If you are embedded in a worldview that sees growth as the goal, really deeply, ask yourself and question that and move to... Okay, my biggest piece of advice is to tap into what we deeply know in our own bodies. In our own bodies, we know that health doesn't like growth. I mean, when kids are small, yeah, that's a great sign of health. And then there comes a point where you don't want them to grow anymore. It comes to thriving and health lies in balance in our bodies. We really get that. I need enough food and not too much. I need enough temperature and warmth and not too much. I need enough water, oxygen, stress on my body, enough and not too much. Salt, Whatever you want to add. That my bodily health lies in balance. And if something inside my body tries to grow unstoppably, we call that cancer and we move in and we stop it as soon as we can.

(01:29:09):

We deeply understand that. And each one of our own bodies is a complex adaptive system. So each one of us is a miniature living ecosystem, planetary experiment. If we

can take therefore what we deeply know, not just metaphorically, but really deeply from the human body to the planetary body and say what makes sense for human health makes sense for planetary health, and how then do I live when I tap into that thinking and how do I eat and travel and invest and divest and protest and volunteer, and how do I protect the health of my body as part of the health of the whole planet? Back to how does the parent look after their child by looking after the world? It's deeply interconnected. I think when we tap into that, we give ourselves the best metaphorical opportunity to understand the much greater living system of which we are apart.

Nate Hagens (01:30:01): Sobriété and lagom Kate Raworth (01:30:01): Yes.

Nate Hagens (01:30:08):

So how would you change that advice to a young human, 17, 18, 19 year olds who are sitting in your Oxford class? Do you change your recommendations for a young person?

Kate Raworth (01:30:20):

Well, so many of these young people, as I said, they grew up climate striking. Their teenage years were spent marching for a stable climate. They've come from a very different place, and I would say to them, have the courage of your age and I mean your youth. I've been in places where a young person came up to me after a talk and she said, "Oh, I really wanted to ask a question, but I'm only 17." And I said, "Wait, you should have put up your hand and said, 'I am 17, and this is my question,' because actually your youth is part of your power and your saliency in this room and your presence and your long-term view, to which we all owe you a long-term answer." So hold onto that clarity of the demands of youth and carry it through into the classroom and question why you are being taught models that smell deeply dated to you. (01:31:14):

Because the biggest change that I've seen coming through, like we're saying in academic economics, was when the students demanded it's coming from below, it's coming up and believe that systems get transformed. Find out about the history of the civil rights movement and Gandhi and the decolonization movement and the suffragettes and the women's rights movements. And always remember that it's been the rebels and the disruptors who were so deeply inconvenient at the time and often maligned. They are now celebrated on the classroom walls as the heroes of the age. And so those who protest and disrupt and disturb the system, you are doing key work of transforming this.

(01:31:54):

And I would say to those young people get involved because we know psychologists tell us. If the people feel anxiety or stress of the context, it's when you get involved and you start actually channeling your energy into being part of it and working with others and collaborating with others who think like you, that you feel energized and empowered in this situation rather than depressed and overwhelmed in this same situation. The situation around us is the same. How do we change it by changing how we engage with it?

Nate Hagens (01:32:24):

Well, I feel energized and inspired whenever you and I talk. So I agree with you that finding like-minded people that share your ideals and visions of the future is one of the biggest pieces of advice I give to young people.

Kate Raworth (01:32:39):

And there's a 17-year old in all of us, isn't there?

Nate Hagens (01:32:42):

For sure, but I can't imagine being 17 today. I was just complete child when I was 17, relative to the 17-year olds that were my students learning about ecology and complex adaptive systems. The world is caught up to this story, Kate.

Kate Raworth (01:33:06):

Can I just say then, when COVID lockdown happened, my kids were 11, my teenagers, and we had to homeschool them. So I was like, "Oh, homeschooling. I thought, well, I know when I'm going to homeschool them first. I'm going to teach some systems thinking." Because I had once argued, I'd presented the seven ways to think like a 21st century economist with a very mainstream professor, economics professor in the Netherlands. And he said, "Systems thinking is far too difficult for undergraduates to understand." So I thought, "Okay, let's take this on."

(01:33:35):

So I taught it to my 11-year olds. Sat down with a big white board. I drew some, "Here's a reinforcing feedback, here's a bouncing feedback." And we drew some basic feedback loops about COVID. And then I just handed over the pens and they went wild with it, and they drew from people playing the guitar in the back garden to pressure on nurses to pressure and accountability of the government. They just brought everything in.

(01:33:57):

But my daughter, she was jumping up and down with excitement. She's like, "Now I can express what I want to say." Born systems thinker. Now we've given you the tools and language you because you could see these feedback loops in the world. So it's also an incredibly exciting time to be educated if you are equipped with some of the ideas that are going to actually help us go forward. That's why I find it exciting to hand over these tools to young people. Now, what are they going to see? What are they going to do? And what will they envision that we can't see? Because I'm 52, there are so many possibilities that I just can't see. So I love that feeling of the generational handover as well. But see what the next generation do with this.

Nate Hagens (01:34:43):

I think we as a culture massively underestimate teenagers, and I really loved teaching 18 and 19 year olds Reality 101, but I actually think it has to start earlier, 12, 13, 14, 15 on these things because this is a huge resource that's just being taught outdated trivia relative to what the world's going to need. A personal question. What do you care most about in the world, Kate?

Kate Raworth (01:35:13):

So I am deeply inspired by Janine Benyus, the biomimicry thinker. She's one of my heroes. And it's hearing Janine talk about life's capacity to create conditions conducive to life that fills me with awe. I'm not a religious person, but if I'm filled with awe of a miracle of a marvel, it is the regenerative capacities of life on this planet and the systems that keep reproducing conditions conducive to life. That is what I care about most, as a living being on this planet. And that's why I care about economics, the art of household management, being in service to planetary household and creating an economy that is in service to continuing to produce conditions conducive to life.

Nate Hagens (01:36:09):

Other than when we first said hello, the biggest moment of joy in the last three hours for me was I saw a red fox across the road from me on my bike ride this morning. And yeah, the planet is an amazing thing, even in its depleted state on the biosphere relative to a century ago. It is still a wonderful, amazing place. The only place in the known universe to harbor life, let alone complex life. So last couple questions. What specific issue are you most concerned about in the coming 10 years or so in the world?

Kate Raworth (01:36:48):

I'm going to say, well, two things. One, we know more crises are coming. We know more ecological impacts. We know more food price crisis will come when for harvests fail when there are floods. One of my big concerns is, coming back to the point in governance, how will we govern ourselves in those moments? How will we respond? Will we revert to rational economic man and hoard and will powers extract as much as they can? This is a great moment to make your 15% folks. Will we respond like that or will we move towards Elinor Ostrom's description of the commons where we actually recognize that if any of us are going to get through it, because we're all going to aim to get through it and we're going to collaborate. So to me, it's that concern of what is the groundwork that we put in now so that as those crises hit, nations, will they shut their borders or will they collaborate?

(01:37:43):

What happens over COVID vaccine? What happens during food price crisis? How do nation respond to one another? That's the concern. And then the really bigger longer term question of a deeper understanding. Well, for me it's finance. I really haven't. And

so I want more conversations with you. How do we take finance that was designed to endlessly accumulate, that's what financial capital has got into, its current DNA. How do you repurpose that utterly human created design. It's a human construct. How do we redesign that so it's compatible with life on a planet that ends to aims to continually produce conditions conducive to life. So it's not my worry. That's my big curiosity. That's the next step of this that I want to much more deeply understand. Because until we redesign finance, not just tweak it, but really redesign finance, we are not going to be creating economic systems that actually belong on this planet.

Nate Hagens (01:38:47):

I agree. And I have ideas. To be continued on that.

Kate Raworth (01:38:50):

Great.

Nate Hagens (01:38:52):

So if you could wave a magic wand and there was no personal recourse to your decision, what is one thing you would do to improve human and planetary futures?

Kate Raworth (01:39:05):

Magic wand, I would wave a one that would help every person, every person on the planet would realize, feel, recognize that we human beings are an utterly interdependent and dependent part of the web of life. And if we got that, if we really got that and understood our dependence upon whole Earth's living systems, that to me is the deepest change that would then follow through. I mean, of course you're going to run into the design of our institutions and that, but if we all deeply got that and the next generation rising has that, to me, that's the best implant that we can put into our hearts and minds that would help us redesign systems so that we actually belong again on planet Earth. That one.

Nate Hagens (01:40:05):

You're not the first person to suggest that we need a change in consciousness with a large amount of people in order to get to these change in aspirations and Doughnuts.

And it is happening. I think it's happening slowly, but I'm amazed versus two years ago, how many people are expressing these ideas, perhaps in no small part to your work.

(01:40:32):

Awesome. So this was our first public conversation. I know your work. If you were to come back in the future for a round two, is there one particular topic that you are passionate about that's relevant to our futures that you would like to take a deep dive on? Any ideas?

Kate Raworth (01:40:53):

It's going to be finance. I'm going to be asking questions.

Nate Hagens (01:40:58):

Okay.

Kate Raworth (01:40:58):

No, yeah, deep dive into, okay, how does this even begin to look? What is the structural design of finance? I mean, I always ask, well, I often say, isn't it weird that a squirrel gathers nuts in the autumn and buries them when the squirrel comes back in January, doesn't expect to find 15% more nuts. So why do we expect to put money into something and expect to come back and get 15%? So how could we redesign finance? What are the lock-ins to the current financial system we have? Is it possible for new financial system to emerge alongside the existing one? What would have to change in people's own aspirations and sobriété and lagom to put their finance in something else? What would be the offer? All of that.

Nate Hagens (01:41:44):

I have started a new thing you might not know of, but once a month we have a reality round table with three or four former guests on a topic. And maybe to have you and Steve Keen and Josh Farley or John Erickson to talk about this question would be really good.

Kate Raworth (01:41:59):

That would be great. I'm in.

Nate Hagens (01:42:03):

Thank you so much for your time and all your work and to be continued, my friend.

Kate Raworth (01:42:09):

And thank you, Nate, for this podcast because you bringing so many voices together in one place that I know it's a hugely valuable resource for many, many people. So thank you for this hosting, very generously hosting other people's ideas. I really salute you for that.

Nate Hagens (01:42:24):

Thanks, Kate.

(01:42:25):

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