

Center for Humane Technology | Your Undivided Attention Podcast

Episode 29: A Renegade Solution to Extractive Economics

- Kate Raworth: So, the problem begins right on day one. When I give talks about doughnut economics to groups of students or midlife executives, I'll often say, "What's the first diagram you remember learning in economics?" And it's the same the world over, supply and demand.
- Tristan Harris: That's Kate Raworth. She calls herself a renegade economist. A few years ago, she sat down and drew a new economics chart in the shape of a doughnut. Her chart includes the whole picture, not just of what we buy and sell, but the parts of our lives that mainstream economics often leaves out or oversimplifies. For example, here's how she looks at the story about Vietnamese farming communities.
- Kate Raworth: There are parts of rural Vietnam where they're famous for their rice paddy fields. And these households aren't particularly well off, and so somebody had an idea like, "Hey, let's have them come, and having home-stay tourists." You get to stay with a family, you get to be there. Great. And it did well, and it expands, and it expands.
- Tristan Harris: That's good, right? I mean, growth means everyone is better off.
- Kate Raworth: And now it's expanded to the point that those families are utterly dependent upon the income from the home-stay tourists, and actually they're not really doing the farming, so they're having to just try and maintain it so it still looks good. So it almost becomes a mirage of what it is that people are coming to visit. That real thing has been lost in the sheer fact of their arrival in numbers.
- Tristan Harris: The literal and figurative soil beneath their feet has been neglected and discarded. The substrate of these people's lives has become just slightly and subtly more shaky, but they have a new economic foundation, so they seemed to be getting by.
- Kate Raworth: And then COVID hits and the visitors are gone, and their economy has stripped out because what they had come to depend on is gone.
- Tristan Harris: And this isn't just happening in rural Vietnam, maybe it's happened in your town, or city, or on your block. Properties were transformed into Airbnb units almost overnight, and then the feeling of that place changed. There were fewer people to care about the schools, or the potholes, and the parks, or the noise they're making above your head. And maybe a few people made more money, the tourism economy grew, but then the model collapsed with COVID. At least for a little while, people prioritized short-term growth without thinking about the whole system, so parts of that system disappeared.
- Tristan Harris: And technology is what makes this rapid shift possible. But Kate is asking us to notice those shifts and think bigger. As we get all this economic efficiency, is there something else that we're losing, and are we really adequately meeting people's needs? In Kate's book, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*, she lays out a model and gives us a guide for going from a 20th-century paradigm to an evolved 21st-century one that will address our existential scale problems. I'm Tristan Harris.

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Aza Raskin: And I'm Aza Raskin.

Tristan Harris: And this is Your Undivided Attention.

Tristan Harris: I'm just so excited, Kate, to have you on the podcast. Welcome to Your Undivided Attention.

Kate Raworth: Oh, big pleasure. I reckon you're a renegade technologist, and here we go.

Tristan Harris: Let's go. Maybe we should start with your background just to introduce you to many of our listeners and how you became a renegade economist.

Kate Raworth: Okay. I'm 50 years old, so I was a teenager in the 1980s. And having grown up in the '80s and seen a famine in Ethiopia in a hole in the ozone layer and the Exxon Valdez spilling its oil all over Alaska, I thought, "Well, I want to learn the language of public policy. I want to be able to tackle these things." So I skipped off to university to study economics, and was quickly disillusioned and frustrated because it didn't tackle the things I cared about. They were there in the margins. I studied economics for four years actually, but then eventually walked away from the discipline because I found myself, whenever I met somebody, I never wanted to stick my hand out and say, "Hello, I'm an economist," because I just don't want to own that.

Kate Raworth: So I became a generalist. I had no sense of disciplinary identity, and worked with UN and worked with Oxfam and became a mother of twins, immersed in the unpaid care economy. So I had these twin babies in 2008, and suddenly the world's financial markets collapse. And I'm hearing on the radio all these economists saying, "We need to rewrite economics to reflect financial realities in this crisis." And I just thought, "Well, I'll be damned if we're only going to rewrite economics for that, because we need to rewrite economics for decades to reflect the ecological crisis we face of climate change and to reflect the social crisis of people whose interests and needs fall out of the bottom of economics because they're not reflected in the market."

Kate Raworth: So that was what brought me back towards economic, seeing that there was this moment. Somebody once said to me, "Oh, you're a renegade economist." And I thought, "Ah, you put the word renegade in front of it. I can go with that." And it draws people in, "What's a renegade economist then to?" Well, let me tell you what needs to be rewritten. So I find myself coming back towards economics. I drew this diagram of a doughnut in 2012, just a very simple picture, looks a bit like a doughnut, and it went, boom. It went viral almost overnight. And I was fascinated by the power of this picture, and that made me realize there's apparent pictures, there's apparent metaphor, and this is an opportunity to start rewriting economics.

Kate Raworth: So I sat down and I read all the economics texts that I'd never been taught. So I started reading about ecological economics, and feminist economics, and behavioral economics, and complexity economics, and thought, "What happens if I try and make all these ideas dance together on the same page?" And it came out as doughnut economics.

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- Tristan Harris: Many of our listeners maybe would question, why are we on a podcast that normally talks about the interaction of technology and society suddenly talking and focused purely on economics? And I think it's important to make a quick parallel to the work that you're doing in the film, *The Social Dilemma*, the inventor of the Like button, Justin Rosenstein says at the end of the film that this really isn't just a technology problem, it is an economic problem. And he says, I think very clearly that so long as a whale is worth more dead than alive and a tree is worth more as two-by-fours than as a living tree, we humans, we're the whale, we're the tree. Now, we are the thing that is being strip mined into dead slabs of predictable human behavior instead of the living, breathing consciousness or choice making, if there is such a thing as free will.
- Tristan Harris: Whatever extent of free will we might have is worth more when it's not free and it's in steady, predictable, dead slab of human behavior than if it is a living breathing citizen or a healthy growing child. That child is worth more if she is addicted, narcissistic, polarized and disinformed because that means that this business model of monetizing, commodifying and polluting your attention commons is successful. So I think that insight, that the film is actually making a point, that there is a problem with our core economic logic. And I think the question is, what is that problem? And I think that when we identify that, I think it's similar, I suppose, from what I've read and love about your work, what was the core thing that when you're noticing what was wrong or inadequate about economics, what were the places that your attention was looking?
- Kate Raworth: The problem begins right on day one. When I give talks about doughnut economics to groups of students or midlife executives, I'll often say, "What's the first diagram you remember learning in economics? And it's the same the world over, supply and demand. So the question is, what do we put at the center of our attention on day one? Because what we place there becomes central and we build everything around it. So when we start with, "Welcome to economics, here's the market." So many things have already happened. Number one, we've said, "Well, the economy is of course, it's all about markets," and we've stuck supply and demand there with this little crisscross of two lines. And at the point of that crisscross is price.
- Kate Raworth: And so we've put price there as the metric of our concern. So the economy is the market, the market's our starting point, price is the metric of our concern. So many ramifications of this. One, anything that falls outside the market contract in economic language gets called an externality. A car driver decides to buy some petrol and puts it in the car and is driving to work, does a negative externality hitting the cyclist who's breathing in the fumes of all that petrol, not part of the contract, that's a externality. But here in the 21st century, we've got this absurd situation that our economic activity is causing the death of the living planet, and economists say, "Yeah, yeah, that's an environmental externality."
- Kate Raworth: And then I have to go up and say, "There's something profoundly wrong with our theories if we're dismissing or just happy to label the death of the living planet as an externality." So that's one consequence. But the other one is just simply that we start with markets. And when I talk about this and debate this with mainstream economics professors, they look at me quizzically, or they I'm being totally radical.

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Where else do you want to start? of course we start there, it's a great theory. It's a start. I say, "Okay, do where we want to start? Let's step right back." The word economics comes from ancient Greek, it's two Greek words, ecos and nomos. It means the art of household management.

Kate Raworth: Oh. And if you start there. Okay, welcome to the art of household management. What would you think you'd want to know first on day one of household management? We would probably want to know about the household. Well, let's start by learning about this planetary household of ours, how she works. We have a carbon cycle and we really, really need a stable climate. We have a hydrological cycle and we need our lakes and rivers recharging with fresh water. We have biodiversity in a web of life, and we're part of it, and we should know that. So we need to learn about the cycles of the living world if we're going to have any chance of managing and engaging with them.

Kate Raworth: And by the way, we should probably learn about Earth's inhabitants, all other living creatures and humanity. And let's learn about humanity as we actually know ourselves to be in the 21st century, not as some very early economists decided to imagine us because it fit really neatly into their models. So day one, whether you walk into a lecture room and you're told, "Welcome to economics, here's supply and demand." Or you walk in and you say, "Here are the fundamentals of planetary health. Here are the fundamentals of human thriving. Let's design systems that enable that." You right from that first day are on a completely different course, you'll have different worldview, you'll use different theories, different metaphors, and you will come to different conclusions.

Kate Raworth: So where we put our attention right at the beginning has these profound impacts. And what you're saying, Tristan, is how it's been, we focus on markets and therefore the tree is a market object, it's the two-by-fours. We focus on the whale as, well, what can that be cashed in for? We desperately need to move away from that and start with the living whole and ask ourselves how markets can be in service to life, as well as the state in service to life, because there's not just the market out there. As well as the unpaid work at the household, the care. And the commons.

Kate Raworth: So let's look at the full set of economic ways of providing. We've got markets and the state and the household and the commons. And now we've just got amazing conceptual toys to play with all the different kinds of economic interactions you could create through these. It's so much richer and wiser than starting with the market alone.

Tristan Harris: Yeah. I'd love for you to talk a little bit more about metaphors and what is the language that we've been using in economics that maybe hit or occluded what real issues were at stake there?

Kate Raworth: Again, in economics, because it typically starts with, "Welcome to economics, here's the market." Then who humanity is, we show up as this character known as rational economic man, who's a independent, self-interest, quite ego-driven, calculating character with dollars in his hands, looking for the bargains. That's the stereotype of rational economic man. But he's either shopping or working, he's a consumer or

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producer. And so we're there in that market relation. And yes, we all do go shopping sometimes and we work for money, so we all have that market relationship, but it's just a tiny fraction of who we are.

Kate Raworth: So other economic identities, in relation to the state, we might be a voter, a public servant, a protester, a resident of a city. And those are really important state relationships we play. And sometimes the most important thing you can do on a Saturday is go on a protest march. We're also in the household. You might be a parent, a partner, a relative, a child, a neighbor, a member of the PTA at your local school. And we are commoners, so we are people who create a community garden on the corner block with our neighbors. We steward, we co-create, we share, we lend things to people.

Kate Raworth: Now, just imagine an apartment building in a fabulous city. What economic identities is that building filled with? If people live there in that city, they're going to be there partly in their market identities, I'm off to work on a Monday morning, I might go shopping on Saturday, but I'm also there weaving throughout that, I'm coming home to cook dinner for the family because I'm a parent and I'm doing that unpaid care. And I'm going to be part of the PTA at eight o'clock tonight, so I need to get that done because I'm also in the community. And I have a relationship to the state, so actually I go to the town meetings because I really care about what happens to the future.

Kate Raworth: Now, when those houses start to be rented out tourists who want to come and visit this fabulous place, they will leave many of those identities at home. The kids might come with them, but they're doing the cooking and the school. They're there as tourists, they're there consuming and spending money, which might be really valuable to that city. But it's also a very thin version of the full richness of economic identities. So when there's a protest happening in the city, people in that building won't go because they're tourists and they're not part of it. They won't be there at the PTA. They won't be there helping setting up a food bank when the community really needs it. They're not on the WhatsApp group saying, "Hey, is everybody okay?"

Kate Raworth: So we thin out the economic identities that show up when we marketize the spaces that were originally intended to be homes. I just think it's really important to name all of these relationships. One exercise I love doing with people is showing them, "Look, you have roles in the market. Let's label them. Label all the different ways you engage in the market, shopping and working. Label all your relationships to the state as voter and resident and public servant, and protester." Think of all your relationships in the household and all your relationships in the community and realize suddenly that you actually weave in and out of them seamlessly. And it's a rich tapestry that makes your life.

Kate Raworth: And of course, you're always under time pressure moving from one to the other, and you're having to make tough decisions about where to pay your attention. But that is what makes life and community and richness and politics with a small P that local politics of being part of a place. And when we monetize that and just say, "No, no, just replace that rich density with the market relation," it is thinned. And to me,

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that's the way I think about theoretically, what sits underneath. You're talking about communities losing schools because people aren't showing up in that multiplicity of identity. So we need city planners to think about, "How many Airbnb units can be here?"

Kate Raworth: I know in Amsterdam, there were certain blocks that were just as, "You know what, we're just banning Airbnb because it's ruined the community of our block. We're not against anybody making an extra bit of money, but it's having big knock-on effects on the rest of us. And by the way, we're not going to call them externalities because that ain't external that's showing up in my life about people coming in and out of this building and I don't know who they are, I don't feel safe, I don't feel like my kids are safe." So it's really important to take account of this full range of our economic identities, recognize their interdependence and then design spaces that bring them into balance.

Kate Raworth: And I say that word with real intention, because I think balance is a key concept. 20th century economics predicated on endless growth. And you hear it in politician speeches and you see it in economic models, "Do this, sell a two-by-fours, kill the whale, sell it, we'll get growth, we'll get income, increase, increment, and we get GDP growth," as if that was a good shape of progress, forward and up forever. And actually, I think the secret is to shift from the idea that success lies in endless growth, to success lies in balance. And I've thought about it very much from the point of view of finding a balance that enables us to meet all human needs within the means of the living planet.

Kate Raworth: But I can see brilliant opportunity and I'd love to riff with you on it about what's the balance in our use of digital technologies? Where do we find that point where it's engaging, it's useful, it's where I feel we belong, but without getting addicted, drawn, depressed, thrown off course by it? So where do we find that balance? And what kind of structures and ownership and designs would enable us to be imbalanced with the phenomenal power of these technologies?

Tristan Harris: So if we take this to the digital world, according to the logic of the attention economy, we're either an intention consumer, we're just an eyeball. You're use to the attention economy is the fact that you are an alive eyeball who can be sold for something else. Or you're an attention producer, every time you post a video that says, "This is a funny cat video," or, "Here's my friend who died," you're producing information that is attracting the other eyeballs, and we're arranging this attention marketplace. We have an infinite abundant source of information that's getting published and we have a finite amount of attention to consume it. We have an infinite growth paradigm living on a finite substrate of human attention.

Tristan Harris: It'd be great to go back to the moment where you decided to draw the doughnut and where based on these problems, you see that coming about. Because I see what you're saying, there's something about balance, and I think we haven't fully introduced what the doughnut is yet for people.

Kate Raworth: Great. I think pictures are really, really powerful. We spend so much about time analyzing the world through words, which we analyze as they go in, I don't know,

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what did he mean by that? And often we think a picture is a nice little illustration on the side. But actually, pictures seep in through our eyes and go straight into our visual cortex in the back of our heads and literally can sit there. So when we say, "Oh, it's in the back of my mind." Yeah, if it's a picture, it is, and it might be sitting there shaping how you think, shaping what's at the center of your vision and what's at the periphery just as supply and demand does from day one.

Kate Raworth: And I realized these economic diagrams had been sitting in the back of my mind quietly, wordlessly shaping what I thought the economy was, what's in the middle of it and what's outside of it. And I started looking at alternative kind of economics diagrams, like the work of Herman Daly, who you could say as the founding father of ecological economics and the great revolutionary thing that Herman Daly did basically is draw a little square and say, "That's the economy," and draw a circle around it and say, "That is the living planet." That's his revolution. And it's such a radical move that it's not ever actually been fully...

Kate Raworth: Well, it's not even a tool being incorporated into mainstream economics because it just pulls the carpet from under everything. So that's the core of ecological economics, to recognize the economy sits within the living world. I was really excited by this concept when I first came across it, but it hadn't been quantified, it was a circle and square. Yeah. That makes sense to me. But what do you do with that? And I walked away from economics and then found myself coming back to Oxfam after having twins, immersed in the unpaid care economy and immersed in life, actually, immersed in the richness of being a mother full time, which is hard and the community. And suddenly coming back into my job at Oxfam.

Kate Raworth: This was in 2009, and somebody is saying, "Oh, look, here's some big new ideas that have been happening in the world." And one of the pictures they showed me, it was a green circle and radiating out to the edges of this green circle are these big red rays like danger zone rays. And what the green circles showed was... It had been made by some of the world's leading earth systems scientists, and they said, "You know what? We think planet Earth has a set of life supporting systems on which we depend to keep this unique, delicately balanced living planet in balance. And these include having a stable climate and fertile soil and abundant biodiversity and recharging freshwater, and an ozone layer overhead. And if we go beyond the limit of pressure that we can safely put on any of these, we actually risk tipping this planet out of balance."

Kate Raworth: And by the way, we are way over those dangerous zones already on climate, on excessive fertilizer use, on converting too much land, biodiversity loss. So I was really physically impacted by this picture because I thought, that is Herman Daly's idea. He said the economy has to exist within the planet, and look, it's overshooting the planet, it's pushing beyond it. And I was sitting in this big open plan office in Oxfam, and there were people over there who were fundraising for a famine that was just starting in the Sahel of Africa. There were people on the other side who were campaigning for health and education for kids worldwide. So I thought, "Hang on, if there's an outer limit of pressure that we can put as we use Earth's resources, there's an inner limit too that if any person falls below that inner limit of having

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enough food or access to education or housing or clothing, then there's a deprivation of human wellbeing." So if there's an outer limit, there's an inner limit.

Kate Raworth: So I was sitting staring at this picture and I picked up my pen and I drew a circle inside their circle and said, "The hole in the middle of that circle is a place you don't want to be. We were not using enough of earth's land to grow enough food for everybody. We're not converting enough timber into building houses. So hang on, oh, this is tricky now, we've got to use earth's resources to meet people's needs, but not so much that we tip this planet out of balance." And so the circle suddenly looks like a doughnut. So think of a doughnut with a hole in the middle, and the hole in the middle is a place where people are falling short on the essentials of life, it's where people don't have the resources they need for food, and healthcare, and education, housing, energy, transport, networks being part of communication networks.

Kate Raworth: That is a really, really valuable tool in poor people's lives, political voice, social equity. So we want to leave nobody in the hole, in the middle of the doughnut, get everybody over the social foundation so everyone can lead a life of dignity and community and opportunity. Great, but don't use earth's resources so much that we begin to push beyond this ecological ceiling, we begin to push the boundaries and the limits of what earth can sustain. We use so much fertilizer, it doesn't actually get taken up by the plants, it leaches out through the soil into lakes and rivers and creates these dead zones, kills off aquatic life.

Kate Raworth: We emit so much carbon dioxide through emitting of our energy and all sorts of needs that we cause climate change. We break down the stability of the climate, we break down the web of life through biodiversity loss. We create a hole in the ozone layer. So these nine planetary boundaries are what makes this unique living planet work. They're actually the boundaries of the Holocene, which is the state the planet has been in for the last 11,000 years and not coincidentally the era in which humanity began practicing agriculture, because we had stable seasons. You knew that the rains would come so you can plant seeds and trust that there will be your food

Kate Raworth: It's the era of the planet in which all human civilizations across every culture have risen up and thrived and survived, and we would be crazy to kick ourselves out of it. So the goal in the simplest of terms is to meet the needs of all people within the means of the living planet. And suddenly, the shape of progress is no longer that 20th century mantra of growth, growth, growth, it's clearly on a different metric, it's balance. It's balance of meeting human needs within planetary boundaries. And that changes everything.

Kate Raworth: I think we all agree that metaphor is incredibly important because it enables us at the level of our own lives or embodies our own understanding or experience in the world, we use metaphor to explain big things that are hard, and we talk about them metaphorically all the time to each other. It's so embedded in our language, you don't notice it most of the time. I think the big metaphorical opportunity of this century, if we humanity, 10 billion of us on this planet are going to thrive with and as

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part of this planet is to connect what we all deeply understand about bodily health, planetary health.

Kate Raworth: So, every kid, I have 12-year-old twins now, every child in school, my kids at school are learning about the human body, and we all learn. The human body, we've got two lungs and a heart, but we've got all these systems. So we've got a respiratory system, and it needs a certain amount of oxygen, but not too much, if we only breathe oxygen, that will kill us. We've got a muscular system and we need to strengthen our muscles, but you never want to put too much strain on it. Skeletal system, but don't put too much strain on that, the bone will break. Nervous system, we've got a temperature regulatory system.

Kate Raworth: And if our temperatures rise too much, that kills us, but if our temperature falls too much, that kills us. By the way, it's a pretty narrow band. So we understand absolutely at the level of human body, life and thriving lies in balance. And our bodies are brilliant at continually balancing us, but we spend half our day doing this. Oh, I'm hungry. Oh, I'm full. I'm a bit cold, can you shut the window. Oh, I'm a bit hot, can you..." With that switch constantly adjusting. That makes us stay alive. So we get that. Now, if we can take that from the human body and the understanding that health lies in balance, if we can take that to the planet, saying, you know what? Planet earth has a series of fundamental systems on which our wellbeing depends. And if we push any one of them too far, we also kick our planetary system out of health, into death and decline.

Kate Raworth: So I really think this sense of health, human health to planetary health and the sense of balance is well being. It sounds so simple to say in these words, but I really think it's profound. And if we can start to hear that come through in the speeches of politicians who therefore would stop saying, well, the economy is growing and that necessarily is a good thing. And the human body, if I tell you, my friend went to the doctor and he told her she had a growth. That is nothing to celebrate, we deeply and quietly understand that that is a profound problem, because we know that the human body is a complex dynamic adaptive system alive, and if there's something in it, one thing in it that decides out of its own interests to grow indefinitely, to maximize itself, optimize itself within this complex living hole, that is a threat to the life of the whole, and we do everything we can to remove that.

Kate Raworth: If it grows and optimizes itself for itself, anything, then it destroys the wider fabric and the ecosystem that made this complex society, or this complex body or this complex planet alive and thrive. It's complexity that makes life beautiful and it makes life work, and things that pursue their one goal for themselves at the cost of everything else, destroy it.

Tristan Harris: On the muscle point, you also have a bottom of the doughnut where if you don't exercise those muscles, then you actually atrophy them. And I think it's important that this notion of too much too little exists everywhere and that's also how you get anti-fragility. If you don't stress your immune system, or occasionally have pathogens coming in, you're not actually developing and strengthening your immune system. So we don't just want to choke off these negative stimuluses, we need that right

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balance. And I think when it comes to technology, oftentimes, the goal is convenience, ease, don't think, don't have to choose, it does it all for you.

Tristan Harris: And I think there's a balance there if you think about making things so easy that people don't have to think, you actually atrophy their own critical thinking capacity.

Aza Raskin: A standard example of this is just, if you rely on GPS in your phone for navigation, you cease to be able to navigate when you don't have your GPS.

Tristan Harris: That's right. So this often gets turned into a polarity of either let's have Google Maps, and then it does just erase our own natural capacity for knowing and orienting where we are, or let's not have Google Maps and everyone should really be aware of where all the maps are, where their embodied location is. And I think it's like, no, that's a polarity way to say that, its question is what is this healthy balance where how do we simultaneously make it easier to navigate while also deepening your own intrinsic wisdom and capacity to navigate on your own? So how do we give people things that also have them exercising the muscles that they would want and need, which are the life support organs.

Tristan Harris: It reminds me, apparently, a lot of our meat is actually mechanically chewed by a mechanical, like a chewer-type thing before it goes to you so that we make it even easier for it to go down. And I just think when we make things so curiosity-rich, when we have everything be so easy and so too simple of a story so that we can get that information, communication to be as smooth as possible, we're mechanically chewing the information, so it goes down easier, but we're actually losing people's ability to question more deeply. How would I know that to be true? Could I test if the opposite is true? Can I steal man, all the different opposing arguments.

Tristan Harris: We're actually changing and not strengthening the muscles that we need. So that's one thing I hear you saying, is how do we strengthen all these internal life support systems so that they get stronger, more resilient, not as vulnerable to fragility in the sense of that maybe increasing ghost towns, whether it's the ghost town of the Vietnam city that has the rice patties or the ghost town of our children who are operating in ghost personalities, who are more concerned with the number of likes and followers that they have than their own intrinsic self-worth, and having that be an exercise in their own independent right.

Tristan Harris: But there's a second thing you said, which is that there's no organ in our body that is maximizing for its own self-interest, the liver is and trying to out-compete and spread over the stomach and everything else, and if it does, we call that obviously cancer. And so it's obvious that whatever new economic or even digital paradigm that we would have, has to operate, I think, what you call this dynamic complexity. And also has to be aware of self-reinforcing feedback loops. And so I think across the board, we want people's attention, we need a minimal amount of people's attention.

Tristan Harris: If I'm a digital product or service, I need some minimal relationship with you, so you feel loyal, you enjoy the relationship, you'll come back at some point, but if I

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maximize engagement like Facebook or Twitter or something, maximizing usage, watch time, auto play, etc, I'm overshooting into addiction, into isolation, into alienation. We need technology that is aware of the life system that it has embedded in, whether it's literally that technology is embedded in the sleep hours of a child that we don't want to be hijacking, the 12:00 AM to 6:00 AM range of when we can ban...that can be outside the doughnut and say, that's over extracting those parts of the attention economy or like national parks.

Tristan Harris: We don't allow you to monetize that or even tax that versus how do we make sure that we're in alignment with the ergonomics of what makes a society work in a life will live, and including each of those societal organs. So instead of a heart, liver and a spleen, we have social trust, we have relationships, we have school boards, we have shared truth and shared meaning making. We have mindfulness and consciousness, we have critical thinking. We need those kinds of organs to be operational.

Aza Raskin: One of the critiques we'll sometimes hear of the social dilemma is that if it was just the ad-based business model, then what about WhatsApp? WhatsApp doesn't use ads to power itself, and yet, it still causes hate mobs in India, this viral nature of how this information, misinformation-

Tristan Harris: The viral misinformation in Brazil.

Aza Raskin: Exactly. And I think that you have to take the step back and it really becomes, again, an economic logic that's driving the structure of the apps where the VC-based business model is, we'll give you some money, you need to grow at all costs, figure out ways of making your apps viral information and spread viral. And then you'll get 100 extra of your users, and that's where you would get more money. So it's essentially optimizing for infinite exponential growth-based economies. It's optimizing for virality, it's optimizing us for virality, it's a cancerous business model, propagating cancerousness throughout our social world.

Kate Raworth: On the subject of growth, I'm going to turn to the wisest woman I know, who was Donella Meadows. One of the authors of The Limits to Growth Report published in 1972, which although people wanted to say it was nonsense and it had been debunked to actually our economies were tracking the scenarios that they were deeply worried about. So here she goes, "Growth is one of the stupidest purposes ever invented by any culture. We've got to have an enough." And in response to the call for more growth, she would always say, "Ask growth of what and why, and for whom and who pays the cost and how long can it last and what's the cost to the planet?"

Kate Raworth: So those questions just have to always come in, growth, why are you pursuing growth? Why growth? So certainly one place would be to start with that recognition that we have multiplied the economic identities. Yes, we are consumers and producers. Yes. And you may be labor or you may be capital or indeed, you may be the product if you're getting it for free. We also are residents of cities, and nations, and voters, and protesters, and public servants, and within the household, we are parents, and carers, and partners, and relatives, and children, caring for each other in those webs of relationships.

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Kate Raworth: And we are commoners, co-creating and sharing and stewarding. So starting point, we need digital technologies that respect the importance of our ability as humans in social and reciprocal relations to each other, to have those relationships. So then I want to come to the crux of this for me, whenever I think about a product, we deal with companies at Doughnut Economics Action Lab and say, "What would it mean to do our business in the doughnut?" And they want to show you that product, "Look, it's made from sustainable materials." And we buy it, and living wage, supply chains.

Kate Raworth: And we said, "You know what? We can talk all we like about the design of your product, but if we really want to know what your company can do and be in the world, we want to talk about the design of your company." I call it corporate psychotherapy. Someone goes to a psychotherapist and say... I have relationships with some really difficult people in my life and you need to just help me sort them out. Well, if you have enough psychotherapy, the psychotherapist will say, "Hey, perhaps it's not them, perhaps you need to look within and you'll find that some of this is in you."

Kate Raworth: So companies need to do that and not say, "Well, we have all these difficult relationships with the world and our competitors and our supply chains." Why don't you reflect in and look at the design of your organization, and you'll probably find a few answers to what it is that you do in the world or what you have the capacity to be or do. So there are these five design traits, and I get these from a brilliant thinker called Marjorie Kelly, who is a Design of Next Generation Enterprise.

Kate Raworth: And I offer these design traits to anybody who's thinking about a company that they work for or whose products they're using or that they're thinking of working for or leaving, because I think these five traits really help us be detected about what an enterprise can be or do in the world.

Kate Raworth: And they are. Number one, purpose. What purpose are you here to serve? Why does your company even exist? What is it in service to? Is it in service just to itself? Oh, we want to be the biggest four by four sales car company in Europe. Well, we want to be the biggest, I don't know, digital provider in... That's just a self-serving purpose. Smart in 21st century companies actually exist in service of what Marjorie Kelly would call a living purpose.

Kate Raworth: The world needs to sequester carbon, so we've set up an enterprise, we're using business as a vehicle to do that. Communities need to be connected to make change in their neighborhood. We've set up an app as a tool for them to do that. We're in service of somebody else's bigger purpose. So purpose number one. Second, networks, who are you networking with? Your allies, your suppliers, your customers, and your relationships with them, and how do you build in them your purpose, and how do you make sure they share your values? Who do you see as competitors that actually could be allies in bringing about transformation?

Kate Raworth: Third, how you are governed, who has voice in decision-making? What are the principles, and the rules, and the practices, and the metrics by which you judge your success? And how do you incentivize people who work in your company? And

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really, is this aligned? Let's just check back, is this aligned with your purpose? Or actually people... Sometimes you hear the CEO speaks this wonderful world, we purpose, and then you talk to the middle managers and they're actually just incentivized on the next quarterly report. So the real, excuse them there. Now, let's go deeper, let's go down to the real stuff.

Kate Raworth: As in any psychotherapy, the most profound stuff lies deepest, so we're going down here to ownership. How is your company owned? Because whether it's owned by its employees or by the state, or by a founding entrepreneur, by venture capital, or by shareholders, or by a family, all of these design possibilities have profound consequences for what lies deepest, which is of course, the one and only, finance. And what finance is demanding and expecting and how it expects to take its return. And to me, this just explains everything. If we have companies, digital companies that are owned by venture capital, we know perfectly well what finance is saying, "I want 10 times out in 10 years."

Kate Raworth: So do whatever you have to do, grow, grow, grow so I get my payout. And that entirely drives the purpose of the enterprise. So whatever it says on the website our purpose is, no, it's not. It's delivering the financial returns for the owners because of how it's owned and therefore, governed and therefore, networked. So I think you can see in a very simple way, you can see two very different kinds of companies in the world. One, the 20th century one, and I think a lot of today's tech, the way it's owned is determining what finance demands, and that is its real purpose and everything else about it is transformed to align with that.

Kate Raworth: And that is what I got when I saw The Social Dilemma, bang! Yes, now, I'm understanding how this tech is designed and gaming me and gaming my kids, catching our attention and monetizing it because of course, the way it's owned and designed it's tiered to deliver finance. And that is its ultimate purpose even though it doesn't tell you on the website. And then there are very different companies that really do start with their purpose, and they say, "Therefore, if our purpose is to connect community, we have to make sure that we bring in community members who support that, and we only use suppliers and connect with other organizations that support that. We have to govern ourselves in a way that puts the community to heart."

Kate Raworth: "And you know what? We have to be owned in a way that ensures that the role that money plays here is money is in service to our community purpose. We have to recognize the design of enterprise is fundamental and put it in service of humanity and in service of life.

Tristan Harris: In your book, you specify seven interventions to go from the current 20th century economic paradigm to the 21st century. So in the before world, we measure GDP, we measure according to one economic output, in the afterworld, we measure how we're doing in the doughnut. How are we above the baseline meeting the social foundation, but not overshooting into pollution, etc. In the before world, we have self-contained markets and economies, whereas in the afterworld, we have embedded markets and economies that realize they're embedded inside of some larger system.

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Tristan Harris: The third thing is we have rational economic man, and then we lead to socially adaptable humans. Then we have a world from mechanical equilibrium to dynamic complexity, that one's probably a little bit more complex to explain. What I wanted to do is actually link this up though, with the technology one, so let me just skip to that one because I think also is interesting is the notion that let's fix the pollution with more growth. So in other words, externalities, if we keep dumping pollution or waste in the environment, well, the market will eventually see that as a problem, and someone will come up with a waste management company or a carbon capture company or a forest grow trees company to capture carbon, and we'll clean up the pollution with even more economic growth.

Tristan Harris: So we'll just grow our way out of the pollution into cleaning it up, as opposed to in your 21st century Doughnut Economics model, we have a regenerative by design. It's not regenerative because we profit from the pollution and profit from the problem, and then we profit later from a more solutions of cleaning it up, we actually make it regenerative by design. I think about the parallel here is, it's more profitable for our health and food industry to have us get sick with diabetes and then sell us a subscription plan to diabetes, cures for the rest of a lifetime than to have never given us diabetes in the first place.

Tristan Harris: And the same thing here, it's like technology companies have an incentive to addict you and then sell you new devices to manage your addiction to technology, new extra products, like a light phone, to be a lighter phone and sell you new solutions, which is more profitable than actually fixing it in the first place. It's more profitable to invent ways to go to Mars than to fix the planet that we're already on. So now taking these... And the last one that you have here is the notion that we have a growth addicted economy, I just think of it like this heroin addict who's sitting there just addicted to more and more growth, to a growth agnostic economy, an economy that doesn't care about growth.

Tristan Harris: So for each one of these few things we've outlined, I think we could actually do a little riffing here on what would a doughnut attention economics or a digital economics look like? So in the before world, if we had measured GDP, in the before world in technology, we have measured engagement. So we have measuring my own ego. How much are people using my product? Are they using it a lot? How much time spent do they have? And in the after instead of measuring the doughnut, we'd have something close to that, like measuring the doughnut of what is the minimum viable benefit that we can provide for the least cost, least time in someone's life, but not overshooting into addiction, into polarization, into shortening attention spans, into worsening mental health, into depression, into break down of truth, into conspiracy thinking, none of that.

Tristan Harris: Those are the new social planetary boundaries that we've overshot, that difference. How we would do that is we would disallow applications from measuring their engagement GDP, their time-spent GDP. That can no longer be the currency of success, which is also what you're saying. GDP should not be the primary measurement of how many... I believe New Zealand has actually recently said, they're going to measure their wellbeing, the gross wellbeing, as opposed to their GDP. And then I know in Amsterdam, people have adopted your Doughnut

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Economics Framework at a city level saying, "Hey, we're not going to measure our economic output, we're going to measure our scorecard on the doughnut. Is that right?"

Kate Raworth: Well, they still probably have a track of the GDP of the city, but they're saying our vision and our purpose and the metrics against which we judge our success, are we bringing Amsterdam as the doughnut? Are we creating a thriving place for people here while living within planetary boundaries? So yeah, they've adopted that.

Tristan Harris: So this would be a world where let's say, Facebook or Twitter, or TikTok literally just are not measuring the time that people spend or how frequently people use it, because we almost want there to be a division between church and state, just like in a newspaper where you don't want profit to come directly from the perversion of the original purpose of news and journalism and the fourth estate, which is to keep the society in check into report honestly on the facts. If there's a business relationship between car company, Mazda and The New York Times, and then there's some recall with Mazda cars and The New York Times can't report on it, there's not a clean separation of church and state.

Tristan Harris: And we need there to be a separation of church and state between Twitter, and WhatsApp, and Facebook, and TikTok, not caring about how much they addict your children. So it's not about how much your kids feel, it's about making sure that every application is disinterested in the amount of time to get-

Kate Raworth: So, how would you design that?

Aza Raskin: There's a lovely example here from utilities in California, where PG&E ConEd they have an incentive of course, to get you as a consumer to use as much energy as possible because that's how they maximize their profit. So, because they're a public utility, the way it works though is, you use any amount of energy, and above that threshold, you're actually charged double. And so you're like, "Okay, well, that's fine. That means PG&E is going to make twice amount of money, they're really incentive." But any of that money that they make over their threshold, PG&E doesn't get the money. And you can imagine that for Facebook or for Twitter or for TikTok or any of these other sites where there's some amount of attention that we say is okay.

Aza Raskin: And actually, there're really wonderful studies, like Momentum did these great sets of graphs that shows people's regret over time. And there's some amount of time that people use Facebook and they're happy about it, and they go over that and they start to regret it in retrospect. So you draw that line and you say, anything above that amount is actually extractive attention economy at work, and all of that money being made should be taxed and then reinvested into safe alternative regenerative digital infrastructure.

Tristan Harris: So you've gone past the attention planetary boundary, as soon as you're hitting subjective regret, collective subjective regret. I think we still have this page up on the Humane Technology website. People can check out app ratings and you'll see

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the study. And so that's like saying, "Hey, we want to tax the regret attention economy." Well, we can also tax the sleep extraction regret economy, which is to say, let's take all users under the age of, I don't know, 18, and any usage between midnight and 7:00 in the morning is essentially funding sleeplessness and loneliness and alienation. So it's the alienation attention economy, and we want to not just tax that, but have all the money that might have previously been made in that economy and fund the renewal of the soil in those children, in various social programs and ways that they can change their products.

Tristan Harris: And I think we can start drawing some of these lines in the sand, and these are creative economic ideas. We don't know exactly what the thing is here, but the point is, how do we actually live within the boundaries of finite human lives that are getting massively over extracted? Whether that is our political systems, because the attention economy is also living within the substrate of each country's politics. And because it is so over extracted into the outrage planetary boundary, it's moved way off from getting attention into getting outrage, which is the extreme form of getting attention, that it's generated extreme amounts of polarization.

Tristan Harris: Now, each political side in every nation on earth has a newsfeed of infinite evidence of the hypocrisy and outrage and caricatures of the other side that would make them maximally angry, which means it's debased the quality of the intrinsic relationships in that society, because one of the things that our dear friend, Eli Pariser, author of *The Filter Bubble* would say is that the thing that keeps you from being polarized when someone says something that you disagree with is the fact that you have a relationship with them. You know they're a good person. So if they say something that you disagree with, you still give them a moment to talk about it. But when you debase the relationships that people have, then the extreme speech is immediately viewed with cynicism and more anger and more mob.

Tristan Harris: So I think that that's definitely one example. But Kate, do you have any thoughts about any tweaks to that model you might propose?

Kate Raworth: Yeah, no, it's fascinating. So, in the Netherlands, there's an organization that set up called Nabijheid Online, which if I translate that it means neighborhood online. And it was set up in a little neighborhood in Amsterdam, it's a cooperatively owned platform. People could say, "Oh, that's like Facebook." Yeah, that's like next door or something. No, it's not at all because it was designed as a co-op and it's owned by that community, and therefore, it is entirely in service to that community, and it works for them. And it doesn't try to grab their attention and make them come back all the time because it's designed to serve their needs and the community manage it and govern it, and discuss it. So it makes all the difference.

Kate Raworth: With the Facebook model. It's owned by owners who want a financial return, we're accepting that. We're accepting it's owned by people who want a financial return and they're driving for that financial return. And therefore, because that's its actual functional purpose, we're having to place boundaries, and you're designing in some boundaries that are very clever on limit on time, or if it's used between these hours, in which case kids aren't losing sleep, those boundaries kick in and there's a taxation or there's a doubling of price and it's taken off and reinvested somewhere else. So

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you're creating these boundaries to protect, because the internal fundamental design of the entity, the company, is to try to pursue in this growth, and so you're stopping it, you're capping it.

Kate Raworth: And I'm just really interested to know the difference between that and something like Nabijheid Online, which is owned as a co-op, designed to be fit for the community's purpose, whether that also... Does it try to drive growth or it was never designed for that? So it balances more naturally. And one example I'll give, I know that if you join Nabijheid Online, you have to put a real photograph of yourself and your real name, because you won't be rude to people because this is a local thing and you might bump into them in the shop. And like you say, it stops people from being inflammatory and it makes them listen because they're actually a real human being who you might have to encounter. And so they that's part of the design to keep it civil, to keep it engaged and human.

Kate Raworth: So I'm just really interested in the difference between an entity that is owned, and therefore purposed, to pursue that goal, versus one that we accept that the way it's owned means it's actually really, its purpose is to maximize finance, and therefore we need to put in these boundaries to stop it. And of course, both of these kinds of entities exist in the world side by side and the socially owned ones struggle because the financially driven, corporately owned ones have a massive budget and that ferocious desire to crush them and override them. So they tend to dominate. What about if you said... Actually part of the Center for Humane Technology or part of the design of humane technology is to transform who owns it and therefore how it's financed and to make sure that ownership and finance are in service to the goal.

Kate Raworth: And you could put in a mission lock. So you could design that enterprise with a mission lock so that even if it grows and if there's some very nice social brands that grow, grow, and then they get sold and they become quite commercial, and, oh, this started out as a really good brand and now it's just been completely commercialized. Could you put a mission lock into the design of a company so that it would always hold that purpose and that in its own board meetings, there'll be an inbuilt check on, well, what is the purpose we're serving? Well, why are you doing that with the app? You're deviating away from the purpose.

Kate Raworth: So that's a self-organizing system, as opposed to one that's trying to grow forever and therefore having the outer limit. The other examples that you probably know of some companies that sit on both sides of that fence, and what do you see as the difference between them?

Aza Raskin: I think it's a brilliant provocation. And one of the challenges is that there isn't a clean path, there isn't a blueprint that lets you say, "Hey, I want to make a company that works like that, that's beholden to the communities that it serves." There's an easy path to say, "I want to make a C-Corp. There's a now an easier path if you want to make a benefit Corp, a B-Corp that has at least a double bottom line, and isn't just beholden to its stakeholders. And Mozilla tried to solve this by having a for-profit corporation that is completely owned by a nonprofit, where all the people are inside of the for-profit, they're allowed to make money, but the nonprofit that has a

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golden share, it's the sole owner, and so it's that governance up here, which controls and binds what the for-profit can do.

Aza Raskin: And I think a little more generally, one of the things I loved about starting at the top of purpose, the bottom of the stack is finance. And the realization that if you build a company whose financial model is shaky, or it doesn't let you actually serve your purpose, then the purpose is merely cosmetic, it's virtual. It's something that sells, it's marketing, but it's not the real thing. And I think one of the most powerful things designers can do or listeners of this podcast can do, project managers can do, is especially when you're interviewing at companies, ask the question about, how they make money, where the finance comes from, and pose hard questions.

Aza Raskin: Facebook did a study where they asked users to rate whether content was good for the world or bad for the world.

Tristan Harris: This is really important, not what it was good for the user, but good for the world. Was this content that you saw actually a net positive for everyone or bad for the world?

Aza Raskin: And they discovered that you could actually turn the dials and show more content that people view as good for the world and that deeply tones down the polarized rhetoric and the outraged rhetoric. And what they discovered is that it wasn't good for the bottom line. It didn't have the same engagement metrics they needed, and so they didn't really implement it. So here's a case where purpose is completely subverted by finance, and no matter how good your design, if you're inside of a company, you will hit the glass ceiling of the business model. And so I think those sets of questions of where's your finance? What is your ownership? Are some of the most transformative questions that listeners can be asking of their leadership again and again, and again and again.

Kate Raworth: Yes. And if anybody really wants to pick it up and run it in their own company, Doughnut Economics Action Lab and our website is doughnuteconomics.org. There's a tool that we've made, it's called When Business Meets The Doughnut, and it just runs through, here's the doughnut, here's the different ways that companies can respond, and here is that set of five traits, we call it the signboard of five design traits. And it re-invites people to sit down in their company, say, "Well, let's talk this through." Because I've done it with companies behind closed doors and said, "Come on guys, just be honest, where do you think your company is? Are you on the extractive side of purpose or are you on a generative side of purpose? Are you owned in a financial extractive way or are you owned in a way that enables you to be generate?"

Kate Raworth: And people are really honest, and I could tell they were having a conversation they'd never had before. And there's that little bit of looking around like, "Are we allowed talk about this then? Is this is on the table now?" I think it's brilliant advice, when you're interviewing for a company, ask them how they're owned and what that therefore means, finances demanding, and how that influences the ability to pursue the stated purpose. And could you give me an example where you've put purpose before finance, please? In my interview, I'm actually interviewing you right now.

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Tristan Harris: Another parallel from your work is the idea that growth will clean it up again. So here actually as a parallel to in Facebook world, I hate to pick on Facebook, this is true of as Google, YouTube, TikTok, etc, at the same thing, there's this notion of, how do we solve hate speech? We have all this extremist hate speech, etc, and the current model, is well, we'll just get enough AI training data so we can solve hate speech, with just having more hate speech on there, then we'll eventually build a model that can classify it, and then we can eventually start building the AI tools that can classify it.

Tristan Harris: But this is still growing off the back of the problem to later create the solution. We really need something that is regenerative or non-polarizing by design, versus trying to clear up polarization after the fact.

Kate Raworth: So where that comes from an economics, because it's become a very deep assumption amongst a certain generation of economists my age, my generation, and it's because it's got a long tail of bad empiricism behind it. So in the early 1990s, a bunch of economists started looking at what was happening to pollution over time in economies as they grew. And they said, "Look, we've only got local air and water pollutant data, so we've only got that stuff. But what we're seeing is that as economies get richer, first, that air and water pollution increases, but then it decreases. So we've got this upside down U shape like a hill, it goes up, but then it comes down the other side.

Kate Raworth: And when you draw this, it whispers out this promise, which is, growth will behave like a well-trained child and clean up after itself, except they don't, and it won't because it turns out now with hindsight, we've got more data, and the little line where they say, "Well, we've only got local air and water pollution data." Okay. It seemed to clear up, and one of the reasons is because as places get richer, they de-industrialized, and so the industry that used to be in your city has gone somewhere else and now you buy that stuff in. So you're still consuming more stuff, but it's being produced somewhere else in someone else's locality. But then now we've got data on carbon dioxide emissions, we've got data on global material footprint.

Kate Raworth: We can measure a far bigger imprint. And when you take that into account, that curve does not bend down. In fact, it just almost stays in lockstep with, as GDP increases, global resource use and impact increases and you have to have very significant intervention to even to try and start bending it, and no government in the world has yet managed to show us that they can have rising GDP and falling material footprint on the planet. But the long tail of belief in the idea that growth will clean up after itself still has traction amongst policymakers in economic narratives and has to be quashed. And that's why I wrote this chapter saying, "No, growth will not clean up after itself. That is a myth that has been debunked. We need to create economies that are by design regenerative."

Kate Raworth: So we start with the cycles of the living world and say, "How do we create industries that recognize that waste from one process becomes food for the next? That we must use resources far more carefully and we'll collectively and more creatively and slowly, and that means we need the right to repair." Now, we're back on to technology. We need the right to repair our phones and not just to have

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them repaired by that company, but to be able to open them ourselves and be part of that repair. And that's why Fairphone, a Dutch company, was set up to show that you could actually have a modular designed phone that actually brought its minerals through supply chains that didn't depend upon slave labor and really exploited labor conditions.

Kate Raworth: And they're showing that you can have click-open design and modular phones. There's a video on YouTube that tells you how to fix the battery, how to replace the camera, how to upgrade. So we need to create designs that enable us to live within a circular system, and it has huge implications for our behavior and the presumption that when you buy a phone, you should expect that phone to last for seven years, that we should only be replacing our phones once every seven years, so buy wisely and buy one that can be upgraded.

Tristan Harris: How much of this had to do with blind spots in the paradigm of the people who created these systems? So when you talk about the white men from colonialist countries, I think people might hear that as dog whistling and saying, "Oh no, it's just saying all about white men is a problem," but you actually really do a beautiful job of outlining, what was the blind spot of some of the early economic thinkers, including Adam Smith, that didn't see some of the systems that were actually beneath their feet, enabling them and enabling the economic systems that they were envisioning for everyone else?

Tristan Harris: Because I think there's some parallels there to the tech industry where you have certain technologists, in this case, many of them were white men, but I think we can just say they were people with a limited perspective, mostly we're talking 20 to 30-year-old engineering-minded, computer-science-oriented, problem-solving, structured-logic-oriented thinkers. And there's some parallels in the people that have created these systems and what they didn't see in their increasingly godlike powers that are now costing us.

Kate Raworth: Amazing. I'll tell you about the economists and you tell me about the technologists. We all have blind spots, obviously. We're all a product of our circumstance, our privilege, our experience, our life, our identity, and who people see us to be. And that shapes what we get to see in the world. So no one sees everything, but then let's go back to remembering that we also have these multiple economic identities, we could be a consumer, a producer. You might be a laborer or a capitalist. You could be, again, you have a role in relationship to the state, whether as a voter or a public servant or a protester.

Kate Raworth: You're in the household, parent, partner, relative, child, and the unpaid caring work. Or you're in a commoner, engaging with your community. Now, who writes economics is going to change economics depending on which kinds of those relationships they hold. And economics was written, through history, most Western society disciplines were written by men. And it was written by white men from, yes, empire countries, colonial countries. And all of these things have consequences. So Adam Smith wrote this famous book called *The Wealth of Nations*, 1776. And in it, he points out the power of markets.

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Kate Raworth: And he was right. Markets are an incredibly powerful mechanism for coordinating the wants and needs of millions of people who never need to talk or meet because the price signal is being sent through the market, and so people will supply or demand. Yeah, he's absolutely right. It's an amazing distributed system for supplying information. And he wrote this line in his book, which says, "It is not from the benevolence of the butcher, the brewer and the baker that we should expect our dinner, but from their regard to their own interest." So they're not being kind to you making your bread and your beef and your beer, they're doing it because you're sending a market signal and you're going and buying it, it's that their own interests is reflected in markets.

Kate Raworth: So this wonderful line about the butcher, the brewer and the baker who produced your dinner. Well, Adam Smith, when he wrote this book, he hadn't married and he didn't have kids. He was living at home with his mum, Margaret Douglas. So it's just the most amusing sight to hear the Adam sitting there early evening penning this line. And I love to think of his mum going, "Adam, dinner's on the table." And he just carries on writing, totally forgets the benevolence of his mum who bought his dinner, cooked it, served it, probably cleared it, cleaned it away, washed up after him. And Adam went back and said, "Oh yes, market's really supply our dinner." So he did not notice the unpaid care economy around him that supplied his dinner.

Kate Raworth: If he had noticed it in that moment, he could have invented feminist economics 250 years earlier, and we'd have had the care economy written in by Adam himself, but he didn't because of his role in society, because of what he took for granted, like most of us. We take for granted these household relationships. Now, David Ricardo, another great famous founding economist. He was very concerned when he was looking at the agricultural economy in England, which was apart, he thought, "We're going to run out of land we're therefore going to run out of the capacity to grow food."

Kate Raworth: So land is the scarce factor, and he got very interested in land, and land productivity. And then suddenly, there's look overseas, there's land everywhere and we can actually go and acquire and we can colonize. And the idea that land becomes available elsewhere, oh, no, no, no, it's no longer the limiting factor, it must be labor. And he shifted his attention from concern of land as the scarce factor to labor. And that is why we still talk about the importance of labor productivity, raising labor productivity. Even though in many countries, there's millions of people that are unemployed and actually environmental resources are being massively overused. They are the scarce factor, but we're stuck in 19th century economics.

Kate Raworth: So who we are shapes what we can see. And when any one of us sits down and says, "Oh yeah, here's my grand theory." We are going to have blind spots. And that's where economics is going to be so enriched by having people from diverse backgrounds, different races, different histories, different colonial experiences, women, men, ages, because we will see things that others don't see. Amartya Sen who I think is one of the most brilliant economists of the 20th century, a child born in Bengal. He didn't write his economics about markets, he started with the entitlements of human beings because he had come from a place where there'd been famine.

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Kate Raworth: And he asked, "What are the fundamentals, entitlements and the capabilities that a person needs to live a good life?" By the way, that's very similar to The Social Foundation. So he started out with human needs, and he transformed economics through that. When women come into economics, they start with the household economy. In fact, they say, "Let's call it the core economy because it is core to our existence where we begin every day." So suddenly it's enriched by feminist economists. So everything is shaped by our own experience. And we're so wise to collaborate with people who are different from ourselves to help us see all in the round. And that's why economics is getting so much better by having this diversity.

Kate Raworth: Now, you tell me what you think are the consequences for technologies that have invented by probably single, deeply techno-motivated young men, living high-income lifestyles in a fast-moving paced world?

Aza Raskin: I'll let Tristan answer that, but just wanted to add one little piece of flavor, which is that even in machine learning, even in AI research, the models that always win are the ensemble models, because every model of the world is wrong, but useful. It views the world from its own unique vantage point, the world is complex, we have to do some kind of dimensionality reduction doing some kind of approximation. And so you want to take an ensemble of all of them so that the errors cancel out, which to, me is why diversity matters in plurality matters. Anyway, Tristan, I hand over to you.

Tristan Harris: I love your line about Adam Smith, specifically he and his mother and not seeing the caring economy. I really got introduced to feminist economics about a decade ago in Nancy Folbre's paper on the caring economy.

Kate Raworth: Yes. And Who Pays for the Kids?, which is the title of one of her books, Who Pays for the Kids?

Tristan Harris: Who Pays for the Kids? And the idea that we had an unpaid caring economy that actually, was it bigger technically or? I know, some huge chunk of the GDP is actually-

Kate Raworth: It's shockingly big, yes. Although, the mom's picking kids up from school, and the housework they do, and the cooking, and the care steps, if you actually said, well, if we price these at market rates, it's phenomenal. It's at least as big as the social sector that is paid through hospitals and education. So it's massive, massive contribution, but because it's invisible, it's left out of GDP, it gets squashed, it gets exploited, and we massively undervalue it, but it's actually the nurture that sits on... So I love thinking about labor comes to work in the morning, labor shows up for work well, who got that labor fresh and ready? Who laundered labor's clothes? Who nurtured labor when they were ill and made sure they ate well and were ready for work.

Kate Raworth: So labor just pops in the factory door in the morning, hey Presto, but it's reproduced overnight by typically the house wife, the mother who is not in a productive economy where we're making widgets in a factory, she's in the

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reproductive economy that is preparing labor to go into the factory day after day, after day, and raising the next generation of kids to be good citizens, good workers, has prepared for that workforce, but her wage isn't totally unregenerated, the money goes into her husband's hands, let's put it in right now 1950's terms. And then you've got intra-household tensions between who's got the money and who's doing all the work.

Tristan Harris: It's beautiful. It's so profound when you realize, and for me reading that day for the first time, just understanding just how massive the caring economy is, especially when you actually quantify and size it up. And that the architect of our modern economics seen so much as the father of that system, Adam Smith, could himself be so blind to the very thing that was around him. So it's really about having not just skin in the game, but a soul in the game, a first-person subjective experience in the game because I am fighting for the things that I have directly experienced, and my empathy is represented directly in the kinds of products that we make.

Tristan Harris: And I just think that as a consistent philosophical principle is so important in making sure that we get this right. I'd love, Kate, for you to talk a little bit about that with what's happening with Amsterdam or any other examples you can point to of where things are moving in the direction, what it would take genuinely, let's not play false optimism here because I think we're both critical optimists that we derive our optimism from how bad we see each of these issues being. But then also to think about what if a technology company is saying, "We're going to be the first attention doughnut or the first digital doughnut tech platform?"

Tristan Harris: Meaning, we're not going to optimize for engagement, we are growth agnostic. We are not going to clean up the problems afterwards, we're going to be regenerative by design versus extracted by design, and what that would look like.

Kate Raworth: Yeah. Well, our *Doughnut Economics* was published in 2017, and I spent two years going around giving talks about it and talk about what you could do possibly. And then I just think, Okay, okay, enough talking, who actually wants to do this? And I was listening to who comes up to me and after talking to say, "I'm doing this, I can see...." And it's teachers who say, "I'm bringing this into the classroom. I know it's not in the curriculum, but this is what the students should be learning, so I'm teaching this."

Kate Raworth: And that's in schools and universities, it's community organizers who's saying, "Okay, we've declared a climate emergency in our town, but now what? We have to be for something, and we want to use this." It's businesses and enterprises, they say, "Well, what would it mean to do business in the doughnut? Yay, yay, show me this doughnut? What would it mean? What would I have to do to get my company there?" It's cities in places right from day one when I drew the doughnut back in 2012, people wanted to downscale it, can we do a doughnut here, for this town, for this nation, for this region, for this city, for the street? And it's even governments.

Kate Raworth: I wrote *Doughnut Economics*, intentionally ignoring governments, because I thought if I try and make this appeal to governments, I will self-censor, I will be practical, and incremental, and feasible, and doable, so I'm just going to forget the governments

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because I want to go for big, long vision. And what's amazed me is even just in the last three years, the number of governments that have actually picked it up and engage with the ideas you mentioned earlier, New Zealand, I know, Jacinda Ardern, has read *Doughnut Economics*. And she said, "It's reinforcing what I already believe."

Kate Raworth: And it makes sense to me that she has this wellbeing economy budget in the nation, they're shifting from endless growth to thriving.

Tristan Harris: And I believe giving rights to the trees and the nature, basically, giving nature their own rights. So it's not about we're top-down saying we're going to protect this national park, they're actually giving nature its own right to speak for itself in certain ways.

Kate Raworth: That's right. The Whanganui River has its own rights to be respected and to be able to regenerate and thrive as a living body. So, first of all, let's celebrate the fact that there are people in so many professions from architects, town planners, to teachers, to business leaders, to community organizers who say, "I want to do this. This makes sense." And actually, it was when I started being contacted by people in all these completely different fields, you think, "Aha, tapping into paradigm change here." And the fact that we're having a conversation, you work on the design of digital tech and we must be talking paradigm change here because we're meeting above our disciplines and our expert areas, and we're meeting in that space of bigger ideas.

Kate Raworth: That to me is really exciting, it tells me the world and people everywhere want that change and they get it. Second, people then actually start doing it. So yeah, the city of Amsterdam, "Well, we've already decided we want to become a circular economy and we're having an energy transition and we want to be a far more equitable place. We can't have three strategies doing these things completely separately, it makes no sense." So, when they saw the doughnut, they're like, "Aha, aha, this actually visualizes what we were gesticulating towards, what we were trying to express, but here it is. And yeah, we want to do this. We want to make this the goal."

Kate Raworth: So they've adopted it as their model. In fact, fascinating to me, they published their city doughnut report, where we drew a picture of the State of Amsterdam today through the lenses of the doughnut. It's not pretty, it wouldn't be pretty in any high-income city because people are in deprivation and they're massively an overshoot, but they published that in April of 2020, the month in which they had their highest COVID infection. Why? Because they said, "Yes, we are in emergency, but as we emerge from this emergency, who do we want to become? Where do we want to start going? What's our purpose? Let's put purpose at the top of the city's vision. And we want to pivot towards this."

Kate Raworth: So, they've done that now. They've actually inspired other places. Six weeks after Amsterdam published that, the City of Copenhagen had a vote, which was massive voting, say, "Let's draw up our own plan of what it would mean to have a financial and economic plan for Copenhagen to do this." It's popping up in Brussels, in Cambridge, in Berlin, in Costa Rica, in Columbia, in Malaysia, in India, in Barbados,

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there are change makers there who are picking these ideas up. Now, we've created Doughnut Economics Action Lab. We're a small team of seven people, half of us have never met because we created the team during lockdown and we're distributed and we're using the brilliant network technologies, let's use these tools.

Kate Raworth: But we're a little team and we've created an organization that says, "We want to put our ideas in the commons. We're not interested in selling consultancy services." So, we've thought very carefully about what the doughnut is. It's a common tool or public good, so let's make it freely available to people. So here's the tool, we've put it in the Creative Commons and we publish how we did Amsterdam's portrait, here is the methodology, you can use it, we're not trying to sell you anything. So again, going back to those different economic identities, we're not trying to be a market actor, we're in the commons, but we know that market actors, people who are consultants or our businesses or textbook writers can pick it up.

Kate Raworth: And yes, you can, you can incorporate into your work. So we're building a way of enabling ideas to spread with integrity and balancing the integrity and openness. And that's why so many cities in places can pick it up and start doing it simultaneously because they find change makers there who'd make it happen. And for me, this is one of the most important ways surely that ideas have to be able to spread in the 21st century. So that goes back to humane technology. What kind of technologies will be in support of that? Certainly, Creative Commons licensing is a really great example. And that's a legal technology, isn't it? That allows a digital object to spread.

Kate Raworth: We need more and more designs that enable things to spread with integrity so that we know we're not stuck in old intellectual property models, but we can share and create and understand and feel safe in the way we share ideas, because the speed and scale of transformation that's required right now is so fast and so universal worldwide, we have to allow ideas out into the world and to be picked up and put into practice where they are. So we're thrilled to see what's happening in cities and places. Now, you said, what if a company, a digital company wants to do this? Well, I would come right out with my signboard of five design trades.

Kate Raworth: Do you want to talk about living in the doughnut? Okay, my dear companies, let's sit down. Yeah, you can show me your purpose on your website and we can talk about all your networks and your relationships with suppliers and how you're governed, that really matters, I want to know how you're owned and therefore how you're financed and what that finance is demanding, because that determines what you will do with the profits you make, whether you reinvest them, whether you put them into R&D, or whether you pay them out to your owners, or whether you actually pay them down your supply chains as living wages to the people who actually did the work that generates the value you've captured.

Kate Raworth: So it's a real internal look at yourself. And we do this with the cities, actually, the first thing that city of Amsterdam said to us when they said we want to adopt the doughnut, they said, "Well, we just take a look at our own organizations, we realized that we're working silos. We're not equipped to do this. Can we do a workshop?" So we sat with the City of Amsterdam said, "Right. What's your purpose, Amsterdam?" They've got a beautiful purpose to be a thriving, inclusive,

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regenerative city for all residents, while respecting planetary boundaries. How different would the wellbeing of every city in the world had adopted that as their purpose?

Kate Raworth: But then align your relationship with your citizens and your public procurement with that, align the way you govern yourselves and the way you relate to your residents, align the way the city's owned, who owns the land and the housing? Who owns the data? Who owns the businesses that are in the city? Who owns the utilities? And then how is the city financed? A lot of cities, a lot of the money that the city has as revenue is coming from car parking charges, well, what are you going to do now? If we're going to get a lot of the cars out of cities and replace that with light transit, you're going to have to find a new source of revenue, and you have to find sources of revenue that don't game you and come to own you and totally pervert your purpose.

Kate Raworth: So cities need to be redesigned along these, as do companies. And even an individual household could sit down and say, "Right, if we want to live in the doughnut, what is our purpose? What do we think is a thriving life for us as a family? And what are the networks? Where do we buy electricity? Where do we save our money in a bank? Where do we do our shopping? What communities are we part of? Do we contribute to the community actually at all? Are we part of the commons? How do we govern ourselves as a family?" My family, we started having family meetings, and it's great, the kids love it.

Kate Raworth: We want to bring this to the family meeting. Let's actually listen and re-balance the roles and relationships in our family. And then think about how we own, how is the house we live in owned? What assets do we own and where have we invested them and what company have we given them the right to use them to invest and make their own returns, where are they investing that in? So what's our finance and services? So I would invite even families to sit down and have these conversations and transform themselves and take the light and giving up the stuff that we already knew we want to let go of, bringing in and move your electricity account, move your bank account and actually change the way your family has unpaid caring work done.

Kate Raworth: Why should mom always do the washing up in the laundry? That's a really outdated assumption. Let's rejig this work. So there's so much we can do at every level. And each one of us is phenomenally influential. I was once giving a talk in a big town hall and a young woman came up to me, again, she said, "I really want to ask you a question, but I'm only 17." And I said, "Never say that again, you are also powerful!" Do you know that you can talk to 17-year-old girls in a way that people of my generation have no chance? You have so much influence amongst your peers. And so does a mom at the school gates, and so does the newest graduate employed in a company.

Kate Raworth: Dare to put up your hand ask the CEO a question. I've heard CEOs tremble at the questions from the newest graduates because they realize, this is the next generation coming at them, and they don't know the answer to their questions. So we are all very, very powerful in the networks of which we're apart, and that means

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we can influence our peers and I bet you know, the research shows, how are people most influenced? Not by stats they read in the papers, they're most influenced by what they think their peers are doing and what's becoming normal amongst people who they think are like themselves. So we all change each other when we make those changes.

Kate Raworth: Our own personal behavior choices do matter, but I'm going to go back to where you put the emphasis, I agree, it's the design of the technologies and what they're designed to do, and the purpose, networks, ownership, and governance that they are in service of, and their finance, that is always going to be where I put my attention as a detective. And that I think is the ultimate redesigned job for the 21st century, of the institutions that we live by and the architecture of those institutions, because they have to be in service to thriving, from the global financial system to town planning, to all the technology companies in Silicon Valley, we need to redesign them rather than let them redesign us.

Tristan Harris: My honest thing here, the questions that I long-term have about this is game theory and the war-like tribes out-compete the peaceful tribes, the extractive tribes out-compete the sustainable tribes. How do we deal with multipolar traps in the sense of a tragedy to come all these kinds of things. I hate seeing it this way, but this is like my honest, deep fear about the game theory and how it plays out.

Kate Raworth: So, who we tell ourselves we are shapes who we become, and when economics professors teach rationally economic man and tell students while it's this character self-interested and competitive, calculating over time, those students more value self-interest and competition than altruism and collaborations. So the models that we create for ourselves are performative. And all I would say is, as I hear you saying that and telling yourself we're caught in this game theory, that in some way becomes performative on your view of the world and therefore what you must do, and you might be right, but I just, I can't go there.

Kate Raworth: So, I'm just going to say, maybe that's happening, and there's just something else which is happening, which is a whole network of people worldwide who are talking about regenerative design, a collaboration, and symbiosis, and reciprocity, and putting these values, and seeing these values, and seeing where they're in action, and noticing that, and seeing how we can build them and making that happen. And so these are both true and both happening, and I suppose it's a choice, where do I want to put my energy? Do I want to focus on and describe the really destructive thing I see and make it really, really visible.

Kate Raworth: And then does that make more people cynically participate in it in a cynical way? Or do I want to put my attention on making visible the possible of regenerative design, which is what's happening in nature. And again, back to metaphor, it's beautifully available to us because that is exactly what nature does. And mycelian roots under trees, the trees that share the moisture they collect from the air, how the soil nurtures them, the symbiosis between species. So it's all around us and we find it beautiful when we see it, that's why we love nature. So that metaphor is sitting there waiting for us to say, "Okay, how do we nurture that part of human nature?"

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Kate Raworth: It's all in there. Having raised twins now for over a decade, I see their competition, I see the collaboration. Amazingly, the day that my kids played Pandemic, the collaborative ball game, it seems too ironic these days because we've lived it, but a collaborative ball game where you work as a team to rid the world of disease so that everyone survive. The day they played Pandemic and their first experience of playing a collaborative game, they cooperated in a way I have never seen them cooperate, folks. They're quite competitive between them, very different people, and they cooperated.

Kate Raworth: They cooperated not just during that game for about a week after, it was astonishing. So the games we design shape how we interact and they shape our relationships. And so to hell with Monopoly, and why the heck do people give it to their children for Christmas? You're telling them extract from others until you're the only one left in the game. It's the most disgusting version of human interaction, and it wasn't even designed to be like that. Elizabeth Magie designed the Landlord's Game in 1903 to show us what happens when you have an extractive economy. It's horrible. And there was another set of rules that said, "Now, do the collaborative version and look, everybody survives, and nobody's made homeless."

Kate Raworth: They stripped the collaborative rules out and just sold the extractive game. And we give it to our kids for Christmas, like we want to turn them into extractive, monopolistic, capitalists. Why would you do that to your kids? Give them Pandemic, give them Hanabi, give them Castle Panic. And they collaborate, and they come out as richer people who've learned to work as a team together and to look forward and collaborate and teamwork. That is a life skill. So the models we create, the games we create, shape who we become. And I've just said, let's put our attention on what is possible rather than the vortex we see ourselves dragged into.

Kate Raworth: It's teamwork, big teamwork, we need people in all of these places, but the mind of Tristan and Aza are so important, they can't be only caught up in seeing the devastating dangers of that game. Help us all see the other game and build the humane technology that actually brings it to life.

Aza Raskin: I'm reminded of the line, whether you think you can, or you think you can't, you're probably right.

Kate Raworth: Right. And we can change the paradigm of what it is we see. So I'm going to give you one last quote from the brilliant Donella Meadows. So she talks about intervening in systems, he says, "Don't fill around tweaking with the tax rate, or just like the tiny little design, you want to go up, up, up in terms of influence, and you want to comment at the level of the actual paradigm that we're engaging with." And she says, "People who've managed to intervene in systems at the level of paradigm have hit a leverage point that totally transform systems."

Kate Raworth: Now, you could say paradigms are harder to change than anything else about a system, but there's nothing physical or expensive or even slow in the process of paradigm change, in a single individual, it can happen in a millisecond. All it takes is a click in the mind, falling of scales from the eyes a new way of seeing. So, how do you change paradigms? You keep pointing at the anomalies and failures in the old

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paradigm. You keep speaking and acting loudly, and with assurance from the new one, you insert people with new paradigm in paces of public visibility and power. You don't waste time with reaction reach, rather you work with the active change agents and with a vast middle ground of people who are open-minded.

Kate Raworth: And that's what we do at Doughnut Economics Action Lab, we just put out these two rings, it looks like a doughnut. And some people say, "Well, so what?" And other people go, "Oh my goodness, that is the idea I've been waiting for. Oh, I'm totally empowered now, I'm in action, I'm off, and I go." And we find those people and we start working with them. And those are change makers in action. And that's what gives me energy and the sense of possibility of transforming the world, because I see so many people doing it and in action, putting into practice in their own places and where they live in, so we can bring up a web of a different economy and make that transformation happen.

Tristan Harris: I totally agree. And that's why we are hopeful because I think in that anomalous framework, it is ultimately about people who are holding the new paradigm, increasingly having access to the levers of power. And the more we see as you've seen just people reacting to your framework and we see people reacting to the social dilemma and hundreds of millions of people from around the world and in 190 countries and 30 languages responding and saying, "Yeah, this paradigm that we were in wasn't working and what we really need is to be projecting loudly and clearly from the new paradigm." Kate, thank you so much for coming on Your Undivided Attention.

Kate Raworth: Oh, big pleasure.

Aza Raskin: Kate, I'm hoping this is just the beginning of another conversation...

Kate Raworth: I know, I feel like we're just like scratching the surface thing.

Tristan Harris: I know. Thank you so much. It's been such a pleasure having you.

Kate Raworth: Pleasure. That was totally fun.

Aza Raskin: Your Undivided Attention is produced by the Center for Humane Technology. Our executive producer is Dan Kedmey, and our associate producer is Natalie Jones. Noor Al-Samarrai helped with the fact checking. Original music and sound design by Ryan and Hays Holladay. And a special thanks to the whole Center for Humane Technology team for making this podcast possible.

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