Nate Hagens (00:04):

Time for another Frankly. I would like to do more Franklies. I have both a fiduciary and a anxious feeling about these Franklies, because as world events gravitate towards The Great Simplification, telling the truth will undoubtedly be risky. I prefer to be a Monday morning internet quarterback where I can watch people's speeches and the news, and just reflect and talk to my friends. But simultaneous with that, I want to help society, or at least, I intend to help society with both awareness and suggestions for responses. So, I feel compelled to say uncomfortable things and I will continue to do so, especially with timely things in the news.

Nate Hagens (01:08):

This week, I watched an important debate between Jason Hickel talking about degrowth, and Sam Fankhauser talking about green growth, moderated by Kate Raworth, with some fantastic visual aids. I think what wasn't discussed in this debate is a third concept, a third scenario, and in reality, a third rail, which is the end of growth. So, not something that will be green and tech driven, not something that will voluntarily, democratically reduce production, but something that out of momentum and running out of cans to kick, we will be faced with a sharp drop in the size of our economies.

Nate Hagens (02:01):

And this is an uncomfortable thing to state, but I think it's also a really important thing to state, because it empowers individuals and communities to maybe ignore the consensus trance of what society is telling us the future's going to be and change their mindset, change their behaviors, change their ethos, change their networks, because I don't think society will en masse, change.

Nate Hagens (02:32):

So, I watched this debate with interest. I took notes. I would like to review some of the high points of both of the gentleman's main logic and philosophy. And let me say, those three people, Kate, Jason, and Sam, undoubtedly at a party or a college lecture, these would be among my friends. They care about the same things. They care about the suffering of many humans, the unbridled runaway consumption of our current economic system. The deleterious effects, our global, energy hungry superorganism culture have on nature, other species, ecosystems. We all care about the same things. I think the logic of what's going to happen and what the leverage points, are where we differ.

Nate Hagens (03:31):

So, let me first talk about green growth and Sam's presentation. Briefly, I agreed with several of his main points, which is GDP per capita is a lousy measure of human progress. It just shows the pile of stuff and doesn't measure distribution or wellbeing. I think we all agree on that. He also had a point that was counter the degrowth narrative, and he basically said that environmental problems wane in people's priority when the economy starts to suck. And so, he thinks that the degrowth narrative of misery and hardship is political suicide for the narrative. And I can attest to that, because the end of growth narrative is even worse than a degrowth narrative.

Nate Hagens (04:30):

And he also said that a little bit of income is good to help people cope with climate. So, on that very tiny boundary assertion, I agree with him. But if you care about climate, income is the single largest variable that correlates with emissions globally. So, more income, more growth, is going to be spent directly and indirectly on things requiring carbon. So, climate change, first of all, is not the problem. Climate change is a symptom of the underlying problem of a social species finding a bolus of fossil carbon that is giving us right now in 2022, the equivalent of 500 billion human labor equivalents, added to our five billion real human laborers.

Nate Hagens (05:26):

And so, to solve climate change with growth is pretty much an oxymoron, because we will innovate and create new inventions and new productivity, and all that excess will be funneled into things requiring direct energy and materials. So, another comment on the green growth narrative that I disagree with is, Sam mentioned that we have to increase energy efficiency and that will bring emissions down. There is no evidence on a global basis that two centuries of inventions and cleverness and new technology has reduced our energy consumption. We use the proceeds from our inventions and funnel it back into the energy hungry super organism.

Nate Hagens (06:20):

Another of the green growth tenets that I disagreed with is that we can easily grow through 2050 and beyond. Now, Sam did mention that at 2.5% growth per year, we will 10 times our growth in a century, 100 times our growth in two centuries, and 1,000 times our growth in three centuries. And obviously that won't come to pass, but he does think we have another 30 years of growth, easily. And I do not.

Nate Hagens (06:48):

First of all, oil currently is the economy. That may change in the future, but 2050 is 30 years past what is likely peak oil in 2018, with some underlying 6% decline rates on existing oil that are going to catch up very quickly. And we're going to have to run faster and faster to drill, to keep up with that and invest in upstream capacity. So, I don't think growth can be extended for that much longer, unless we have a miracle invention of something. And that will be deleterious for the environment.

Nate Hagens (07:30):

The other thing not mentioned by either Jason or Sam was the monetary overshoot situation that we're in. That we are growing our debt as a global economy, we're doubling it every eight and a half years. And we're doubling the GDP, which is the income stream required to maintain and service the debt, every 25 years. And that's before oil starts to decline meaningfully.

Nate Hagens (07:54):

So, we have this literal musical chairs moment in the financial system, and you can see it with Europe's response. They have \$2 trillion in margin calls because of the Russian-led natural gas crisis. Who's going to pay those? The government is. The government's going to have to print more money, buy more

bonds, guarantee these things. And eventually, we can print money, we can manufacture documents with guarantees, but we cannot print energy. We can only extract it faster. And what we have is a finite amount of low entropy, low-cost energy.

Nate Hagens (08:37):

The other thing not mentioned is the complexity built into our six continent supply chain system and the trust that was created when all countries in the world were cooperating towards economic growth. And now, even with what's happening with Russia and China and India and other countries, this trust that we're all trying to grow the pie together and share, is starting to wane. And then finally, the other last point I would disagree with the green growth narrative is it seems like green growth is in order to optimize carbon or to minimize carbon and optimize climate outcomes. We are not going to optimize for one thing and if we do, it's going to be profits tethered to energy, tethered to carbon energy.

Nate Hagens (09:32):

So, when you optimize for climate, and this is what both Jason and Kate Raworth pointed out, is there are many other planetary boundaries that are ignored or not optimized, like nitrogen cycle and ocean acidification, biodiversity is a big one. So, we're trying to optimize this multivariate issue. Carbon and climate are important, I don't think we're going to en masse optimize for that. So, I am very, very skeptical of a green growth trajectory.

Nate Hagens (10:14):

Jason Hickel, in this debate talked about degrowth and he defined it as, "A planned and democratic reduction of unnecessary production in rich countries, in a just way." Philosophically, I don't disagree with that. I think anyone paying attention knows that our economic system is not working for many people and that the costs are back loaded until the end, especially the environmental and some social and health and wellbeing costs.

Nate Hagens (10:49):

I agreed again with many of the things that Jason Hickel said, he commented that, "Our current economic system ignores human needs and chooses to build more SUVs." That's true. He said that, "The Global North depends on an influx of resources and environmental input from the Global South." This is also true. He mentioned that our economic system focuses on a return on capital instead of the interests of people and he highlighted, "There are over four million children in the United Kingdom living in poverty." This is also true.

Nate Hagens (11:30):

And he also correctly criticized the green growth story by focusing only on energy, because even if we are able to have low-carbon, affordable, scalable energy of the property and density and transportability and EROI, and everything else, that we would need, a increase in growth also increases our material footprint. So, if we're going to double our growth, our GDP, we're going to double our material footprint. And this is already, even at the tiniest scale of scaling a renewable energy economy,

in the last two years, the price of lithium is up 900%. The price of nickel and copper and cobalt, and many other material inputs into a renewable sort of electrical system, are also significantly up. So, we do not have the amount of materials needed to scale this sort of electrical, renewable economy.

Nate Hagens (12:36):

But my main critiques with the degrowth movement, despite being philosophically aligned, is first of all, there is a belief that we can decouple emissions from GDP. Jason even said, "This is the case and if it was not the case, we are doomed." Those were his words. I don't think it's the case and I don't think we're doomed in either case, but he was talking about a cut of emissions by 50% by 2030 and 100% by 2050. This is just not going to happen. We are currently using renewable energy to extend the amount of fossil energy we have. Adding renewable energy in our current system with a GDP-based objective culturally, is making emissions worse, not better. Renewable energy is making our climate situation worse.

Nate Hagens (13:30):

Of course, it's not the fault of the technology. Renewable energy is the right answer to the wrong question. We could be using solar and wind and geothermal to provide human services at a lower scale than we have now, but we are all in thrall to the economic driver of profits, profits, profits, every quarter, tethered to energy, tethered to environmental damage. So, energy and GDP are 99% correlated. There are many countries who are decoupling, but from a climate change standpoint, we don't care about those countries, we care about the global system. And we're hitting new all time highs with emission and energy use globally.

Nate Hagens (14:14):

And it's kind of a clue what's happening in Germany. They're beefing up their coal imports. They're importing coal by train, because they don't have enough natural gas for electricity. And next week's topic, they're going to wood in a big way. Another comment of the degrowth movement that I philosophically agree with, but practically do not, is that, "A wealth transfer would be an immediate reduction in energy use and it would improve equality."

Nate Hagens (14:48):

Well, it would certainly improve equality, but the issue is, there is a elasticity of consumption between the very rich and the bottom two quintiles of society, in terms of income. And the top 1% of Americans, I'm talking about, spends 7% of their income. The bottom two quintiles, the bottom 40% of Americans, spend 105% of their income. So, if we were to have a wealth transfer simultaneously from the 1% to the bottom 40%, there would be an immediate 15 times, give or take, call on coal, oil, copper, forest, hamburger, things at Walmart, ordering things from Amazon, et cetera, which would all have an environmental footprint.

Nate Hagens (15:41):

Not only that, but where do you draw the boundary on equality? Because helping those poor Americans, then what about poor people in other countries that don't have any access to energy service? What about unborn generations that won't be able to burn this 10 million times faster sequestered fossil pixie dust that will not be available, and we're burning it now. If we burn it, they can't, it's a rival good.

Nate Hagens (16:13):

And not only that, but what about the other species that every billion barrels of oil and coal and gas that we burn makes the oceans more acidic and impacts the viability of food webs for dolphins and whales and many other creatures. So, where do you draw the boundary on equality? Is a question that I don't know the answer to.

Nate Hagens (16:37):

Finally, my other critique of green growth is that there are no mechanisms for a massive wealth transfer from the rich countries to the poor countries. There is a metabolism to our system. In biology, Klieber's Law shows that the energy use or the metabolism of an organism is its size to the three quarter power. And if you aggregate all the 190 or so countries in the world and draw their growth trajectory versus their size, the same formula applies, that our energy use is the size to the three quarter power.

Nate Hagens (17:26):

More practically than that though is, there is a momentum and a physics to the way that our global system works. And you can't just stop things or transfer things, because of the complexity of the built infrastructure. There were lots of great ideas in the Soviet Union before it collapsed, but these long-term ideas of wealth transfers and means of production transfers are generational in nature. There are no quick fixes. And the quick fixes, because of the complexity, run a risk of a catastrophic failure. So, I just think the embedded momentum of the financial system and the productivity of factories and infrastructure and roads, cannot easily be quickly transferred from the North to the South, even if there was the political will.

Nate Hagens (18:26):

So, where does that leave us all? I think there are many growth critical philosophies out there. There's my friend and mentor, Herman Daly, came up with the steady state economy. There's the post-growth concept. How are we going to live differently with lower material throughput in communities with regional supply chains, et cetera? There's the degrowth movement. There's the green growth movement. All of these are growth critical in that they accurately recognized that our current system is not functioning for everyone. And not only that, but we're shoveling fuel into a runaway train and the future needs to have some midwives working on steering that train away from disaster or slowing it down.

Nate Hagens (19:25):

My view is that the momentum is so strong that we will continue to shovel fuel into that train, because we have to. Look at what's happening just with Indonesia, Czechoslovakia, Slovenia, in the last few days,

with the indirect increase in energy prices from the Europe situation. And there are riots and demonstrations in the street. Loss aversion, to humans, is a real thing, where the loss of something feels much more negatively intense than the equivalent pleasure we get from gaining something.

Nate Hagens (20:03):

So, I think we are right to criticize growth. Growth will continue as long as it possibly can. We will pull out all stops in order to keep growth going, and then it will stop. And when it stops, because of the preceding steps and cans we kicked, there is a giant Wile E. Coyote moment waiting in the financial and currency systems. That is what I'm trying to inform and educate catalysts and pro-social humans both in their professional careers and in their lives and in their communities, to really think about and really change their mindset and their behaviors ahead of that moment, so that we can change the initial conditions of that moment.

Nate Hagens (20:57):

I think that growth ending in the next decade or so, give or take, is a mathematical certainty, but we have this financial leverage on top that we're going to have to deal with. So, degrowth, great idea. I think as individual humans, many of us watching this video, listening to this show, can and should degrow. Degrowth, for many people in the Global North, would be a healthy thing, both physically and behaviorally. I think as Jason Hickel pointed out, many people cannot possibly degrow, because they're already at the red line.

Nate Hagens (21:38):

So, I think, anticipating an end of growth, as painful and anxiety producing as that is, can inform better distribution and better break glass plans ahead of that moment. And so, even if the people in the degrowth movement, the people in the green growth movement, disagree with what I'm saying here. Let's just say that what I'm saying is 10% possible. Let's put some resources and thinking and scenario planning into this 10% possibility that an end of growth is coming this decade, and respond from there. Sorry for the long ramble. I hope this was helpful. And I'll talk to you next week about trees. Thanks.