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[00:00:00] Greetings! Time for Ask Nate Anything. That would be me, Nate. I've wanted to do some live Q and A things on YouTube, but I'm not sure that I have the ability to facilitate that. So I sent a sub stack and asked people for what questions they have. We got over a hundred questions on the sub stack, the discord, and via email.

[00:00:22] I'm just gonna, not randomly, but I'm gonna select a bunch of them here. I don't even know how many I'll have time to get through. Maybe we could do this more often. I'll preface it by saying I have a lot to say. I have a lot of thoughts, but I'm no one's guru. And I don't have answers to a lot of these things.

[00:00:40] From the start, I've tried to describe the game board that we're a part of. And I'm more confident about how the different chess pieces as they were, fit together and the moves that are possible, but, As far as what moves to make I'm no clearer on that than I was when I started this. So here in no particular order are some questions.

[00:01:18] I want to ask, Nate claimed at one point that energy use is one of the things most closely correlated to economic growth, but I've recently come across EPA figures suggesting that gross U. S. power consumption has gone down over the last few decades. Some of this could be correlated to offshoring or manufacturing, but I'm wondering what figures are out there trying to get a realistic picture of this.

[00:01:41] Okay, so this is a complicated thing, let me try to simplify it. Power is electrical power and that is around 20 percent of the global energy use. The other 80 percent is things that aren't power like heating and transportation et cetera. So also there are national and global figures. So you're talking here about the United States.

[00:02:07] Here's a graph showing U. S. power consumption from 1950 to 2022. The, our electric consumption did not go down the last couple of decades, but it did start to flatline. So globally, however, there is just a tiny decrease, if at all, in overall energy use and an increase in overall fossil fuel use. So the the math is as

follows globally, growth, is 100 percent correlated with materials and 99 percent correlated with energy use.

[00:02:45] But correlation doesn't mean that for every 100 units of new GDP. We use 99 units of energy. It just means that there is a strong inclination that they are tightly linked. The reality is if you look at this chart is for the last 50 plus years, GDP has grown 3. 2 percent per year. Energy has grown 2.

[00:03:12] 04 percent per year. So globally. It's around 70 units of energy are needed for each 100 units of new GDP. And you are correct. The reason that the correlation in a service based economy like the United Kingdom or the United States is lower. is because we outsource a lot of the heavy lifting and products that we import where the energy was burned elsewhere.

[00:03:43] The average American today uses 57 barrel of oil equivalents of coal, oil, and natural gas. And we import another 15 barrels of oil that were burnt barrel of oil equivalent that were burnt in other countries that are embodied in the products that we import. Given the ongoing, ever descending polycrisis, what do you trust?

[00:04:05] What, if anything, gives you hope? Or have you, like me, given up all hope and simply trust the process and find a kind of existential fascination in watching it all unfold?

[00:04:18] I don't really like the word hope. I think resolve and meaning purpose And a trust in the emergence of what may unfold is something that I am more aligned with than the word hope. What I trust is my group of 20 or 30 systems ecologist friends who I've known for 20 years that really understand these things.

[00:04:50] I trust my dogs. I trust my closest friends. I trust my own eyes. And I trust my gut reaction to things. I think the future will be much worse than most people are aware, but probably much better than most following this channel, or many following this channel expect. And so I've long ago grieved for the futures that our society is telling us in the movies and on CNN.

[00:05:22] But I think the future could be much better than we fear. And that's why I'm doing this work. Fascination. There is a little bit of a morbid fascination of

looking at what's unfolding, but I'm less and less interested in that. And more and more thinking about what are the intervention points. I loved your interview with Paul Ehrlich.

[00:05:42] I think often the question you posed to him, you asked him if he felt guilty or responsible for the fact the population bomb prediction was so far off in timing, he couldn't predict the green revolution, and that it gave those who didn't want to address population an opportunity to ignore it. Due to The delay, the consumption consequences, the political untenability, the issue now lives in a black box for many in the environmental and ecological movement.

[00:06:08] Only Reiss and a handful of others discuss population, and yet population is a critical integer in the overshoot calculus. Other than interviewing Ehrlich, are there others you could bring on your channel to discuss this math? Do you personally wish you could talk about population more fluidly and with less apprehension?

[00:06:27] I think by the time this episode airs, there will be an episode out with Corey Bradshaw specifically talking about human population and its impact on biodiversity. We will have a population round table in the near future. I have no apprehension talking about population. I just did a frankly talking about overshoot.

[00:06:46] Overshoot, the definition of overshoot is a population exceeding its carrying capacity. Eight billion humans at one time is not sustainable. Full stop. However, my work is focused on the bend not break moment in the next 10 years, according to my calculus and changing the consciousness of more people to care for midwifing wild nature through the bottlenecks of the 21st century.

[00:07:15] Whether we do something or don't do something about population is not going to affect this bend or break moment. In fact, if we were to go on a no sex um, commitment for the next three years and no one had sex and no one had babies, that would accelerate the financial musical chairs moment because there wouldn't be that economic impetus for baby diapers and strollers and nursery school toys and, you know, janitors and pensions and all that.

[00:07:48] So a population obviously is an issue. I don't think it's in the top 10 issues of the next decade, meaning a financial overshoot, the unwind of complexity. That

was a one way street. Geopolitics, the resource grab, the social contract, all those things are more important than population now. And. We can't even get people to agree on climate change policies, let alone population policies.

[00:08:18] So it's not that I'm not willing to talk about it, I just don't think it's relevant to the things that I'm trying to prepare culture and society for. It has been two and a half years since you released the first episode of The Great Simplification. How has the way you make sense of today's converging crises changed?

[00:08:36] change since episode one. If you could start the podcast over from scratch, would you do anything differently?

[00:08:45] There's a lot more conversion crises than I originally anticipated. I've learned a ton. I think had I do to do everything from scratch over, what would I do differently? I would have started this earlier. I have a ton of. vertical and horizontal connections, relationships in the broad scientific space around the world.

[00:09:07] And I should have started this in 2016 or such. I realize now that it's important to have a diverse conversation about the head, the heart, and the hands. The head is the intellectual framing of the biophysical constraints we face. The heart is the change in consciousness, the change in value, the change in definition of we the recognition that this is not who we have to be as a species, the recognition of what we're doing to the planet the recognition of the colonial impulse and the hierarchical.

[00:09:46] male dominated culture, when half the people on the planet are women and the majority of people on the planet are not in colonial countries. Those sorts of things I've learned and integrated. No, I think I would be doing the same thing. I think I would have arrived at this place, which is a very difficult place so I wish I would have started earlier.

[00:10:13] What do you think is a crucial skill one should develop and nurture that would help them not only survive an unknown future, but perhaps even thrive in it? Definitely coding. Or, Making thatch sandals. No, I'm kidding. I don't know. I think it depends on your aptitude, where you live your age, what you care about.

[00:10:38] But I think The biggest skills are internal inner tech, and to have a healthy physical and mental body and mind I think the biggest skill is to not be addicted to the dopamine siren song and the ghost of dopamine past that many of us are in our culture, because if you're not, it gives you greater diff degrees of freedom to do things of meaning without being pulled down into the, the heavy, warm ruts of the ghost of dopamine past.

[00:11:15] So I think intertech becoming more patient tolerant. calm you know, having a healthy reptilian and enteric system. I think that's the biggest skill. And then above that, you can build other skills. How are your potatoes, the chickens, important people in your life? I need to stay connected to the earth.

[00:11:39] I find that far more important. There's never enough time, true, breathe. My potatoes suck. Here's a picture of this year's potato patch. I planted four rows of 15 feet each and I didn't have time to weed them. I got one batch out and then the weeds took over. I do have a few potatoes growing in the hugelbed that is 10 years of compost and I've eaten some of those.

[00:12:13] I do have friends that grow potatoes and the local farmer's market here in Red Wing, I will be a supporter of that and I have been every Saturday morning. It's okay, I know how to grow potatoes, I've grown potatoes for over 20 years and even done EROI studies on my own labor. So it's a skill that I have and I can do it.

[00:12:36] This podcast and this small organization, Breathing Life Into This has been a huge focus of mine. My chickens and my ducks, thank you for asking, are doing great. We lose some every few months to foxes, coyotes, raccoons, weasels, stoats eagles. But I've had two batches of babies this summer and baby ducks are about the cutest creatures on the planet and it makes me feel alive and whole to sit and hold some baby ducks and some of them even imprinted on me.

[00:13:16] They crawl up and be by my neck and I'm at my most content when I'm hanging out with my dogs or my ducks or my chickens. They're doing well. Important people in my life. Well, unfortunately my Dunbar's number is way higher now than I can support. And so some of the people that are important to me, I've fallen out of the backside of the Dunbar number because of this work.

[00:13:43] Of course, I, my best friends are my parents and my brother and my girlfriend, and those people are doing fine. But I've lost touch with a lot of people that I care about, and it's just a limit of our busy world. But, on balance, thanks for asking they're, you know, the big thing is we can't do everything.

[00:14:07] Even this podcast, you can't cover all the topics that the carbon pulse has implications for. You can't do everything. So I'm trying to broaden the conversation for society to better hand the baton to others that are watching this program. To be leaders themselves and be more informed on the upcoming decisions.

[00:14:36] And I am not that ambitious, actually. I would rather just teach college and hang out with my animals. But the stakes of our times call for something different. And I think what I've learned and put together the last 25 years has to be shared. So I feel a fiduciary to doing this. And I've. My potatoes suck and I lose some chickens to a fox because I didn't fix the panel in their pen.

[00:15:03] That's a cost that I'll accept. Thanks for asking. Given the simplification of society will be very likely precipitated by either geopolitical event or financial event, both go hand in hand. What metrics or particular event are you most concerned about in the next five years? I acknowledge your prior commentary on nuclear war.

[00:15:25] What financial circumstances would be a marker of a major shift on our global circumstances and trajectory? Yes. I think the financial Wile E. Coyote moment is a big one. And what I would be looking for there is a major currency would go into freefall or major bond markets would start to have no bids, higher yields would go up, which would mean that there is no more trust in the debt will bail us out.

[OO:15:53] I think if NATO, US, UK, et cetera, actually puts troops significant troops on the ground in Ukraine and, or in Russia, that would be a sign of, of escalation that I think US versus Russia. If that happens, ends in nuke, nuclear weapons, so it can't be allowed to happen I don't know what to do about that, but I would look at I mean clearly if there was an oil shock because of something that happened in, in the Middle East that would be an overnight thing and everyone would know that.

[00:16:32] But I would look at oil, bond markets geopolitical movements. And, you know, one of the things that I look for is, is you know, as we move towards totalitarian impulse, which is happening in the UK and elsewhere. When do we lose freedoms of speech? That's something that I'm worried about as well.

[00:16:57] So there, there are some warning signs that I'd look at. Will the spending of carbon taxes result in additional emissions of carbon? Yes. There's direct carbon, which is the coal that was used to build something the fire. And then there's the indirect carbon, which is an item that doesn't have a lot of carbon in it.

[00:17:18] that you buy at Home Depot or Walmart, but there was a lot of carbon in its supply chain. So if we have a carbon tax and a carbon dividend, and those people who didn't directly use carbon get a dividend, most of the things in today's society they would spend that dividend on contain indirect carbon.

[00:17:40] So yeah, that's an issue. Similar to before, what do you believe is humanity's nearest in time greatest threat? What would you realistically propose to avoid its worst effects? By far the largest greatest, nearest threat is nuclear war. I think we are asleep at the wheel with 13, 000 nuclear weapons, with countries that are antagonistic to each other, and there's any sort, I mean, there's no one saying let's go to nuclear war with them.

[00:18:08] That's not how it's going to be. It's going to be some accident and there's going to be some retaliation. And then there's going to be a bigger retaliation and all the modeling by Proud Prophet in the eighties and the AI things lately show that once a nuclear exchange starts, it's off to strategic exchange, which is.

[OO:18:28] Armageddon for the world. What do you do to avoid that? I even don't like talking about it on this podcast because there's nothing that we can do as common people, but I think we need governance. Governance underpins almost all of the issues facing in The Great Simplification. I'm no expert on it. I don't really even know if there are experts on it, but we need new forms of making decisions going forward.

[00:18:54] And I'm happy to host Discussions on that if people have suggestions. If you were asked to advise national leaders about these issues, where would you

begin? Would you even be willing to do so? Why or why not? What would be your top three recommendations? Would they differ for a U. S. presidential candidate?

[00:19:13] Related question from a different person. How can we get your episode with Johan Rockström into the eyes of Kamala Harris and any other mover and shaker in this crazy country? Who can we identify as the right people to hear this and how can we get it to them? I'm sure that Kamala Harris and most high level politicians are aware of the general breadth and message of Johan Rockström's planetary boundaries.

[00:19:37] They've had to have been briefed by that. President Obama had a scientific advisor, John Holdren, who I plan to have on the show in the near future. He gave Obama a Monday morning brief. Like eight to ten pages of the science. A lot of it was with the natural world and climate. Obama read every bit of it and asked questions of John.

[00:20:00] I am sure that Kamala Harris has something similar. The issue is that the answers to These things that we talk about, planetary boundaries, global heating, ocean acidification, plastics, are not in the political realm of possible. We can't even pass a 15 cent carbon tax. So the answer is, of course I would be willing to talk to anyone about these things.

[00:20:30] I think This is the realm of advanced policy. We have to inform future leaders about what's coming and have scenarios that are credible and a menu of options of how to intervene and make what's coming less bad. What is one thing you are personally worried about that is not climate change or nuclear war or energy depletion?

[00:20:57] Something a bit more under the radar. Well, I'm worried about a lot of things, as you know. One thing I'm worried about is the continued shrinkage of what's able to be said that is counter narrative in the world. It's one reason I want to grow the sub stack, because if there is a, Democratic sweep or Republican sweep in the U.

[00:21:26] S. elections. Under both those scenarios, I could see this channel be throttled down and possibly it's too small at the moment. But if I continue to tell the truth and if this continues to scale there are some decided off narrative

messages. For the Democrats, I am talking about renewable energy not being able to power this civilization.

[00:21:52] I talk about evolutionary psychology and the fact that biology constrains and informs our behavior. On the Republican side, I talk about global heating and empathy and kindness. which should be conservative principles, but this entire podcast is off narrative on what will be considered the party line.

[00:22:16] And I do worry about you know Big Brother meets idiocracy in the media space, and it's going to be increasingly difficult to talk about these issues in an honest scientifically referenced way, so that's one of my biggest personal worries. I love and learn much from your podcast, and I'm also aware that successful podcast episodes have formats that work well for the audiences they gather.

[00:22:48] The medium is the message. The format includes folks having established linear verticals, legitimacy through published books or organization popularity and such, as well as folks speaking in ways that to me sound decidedly global north. And yet the podcast is essentially a profound effort to slow and pause and unravel The Great Simplification.

[00:23:09] My question, how can The Great Simplification podcast shake itself off The Great Simplification compulsions and traps of the podcast medium? How can it invite Earth's diversity in? I think about this a lot. We have monetization turned off. I'm trying to speak the truth that I see in its multifaceted splendor and horror.

[00:23:35] I have recognized that the great simplification is a global phenomenon. In fact, many countries in the world, many species in the world, are facing the great simplification now already. So it is a global conversation. Part of the challenge is. A lot of my friends are old white guys, systems ecologists.

[00:23:58] And I started the podcast with my friends. That's easy for me. I don't know a lot of English speaking experts on these topics in India, Africa, China, et cetera, but I'm very open to having them as guests because this is a global situation. Around 38 percent of the followers of this podcast are.

[00:24:22] United States residents, which means over 60 percent are in other countries. I, as I said earlier on this, frankly, I think it's the head and the heart and

the hands. And we can't just analyze this like an accountant or even an ecologist. I believe we need a lot more women in future decision making positions.

[00:24:51] And Women and men are just different, obviously. And Ian McGilchrist talked about a left brain, right brain. That's one of the dichotomies. There's the brain and the body like embodied reaction. I live most of my life in my head and my body is a little disconnected from my head. And that's one thing I'm working on.

[00:25:15] So all I can offer is. I want to highlight diverse voices. But I have a little bit of a checklist, right? I want people to have something that is science tethered and credible. I want the topics to be relevant to The Great Simplification. And they have to speak English, unfortunately. Um, So I'm open to that and hope to have more international guests.

[00:25:43] And in fact, I do have a lot of them either recorded or scheduled. I like your work and agree with most of your conclusions. However, your approach is highly scientific, philosophical, complicated, intellectually elitist, and incomprehensible to the vast majority of people. And it's the majority that counts.

[00:26:02] How do we simplify the simplification to make the majority embrace it, to advance it from an intellectual exercise to a tangible undertaking? Good question. Good observation. Yes. This is, I mean, I don't want to come across as elitist, but I realized that the language and the topics and the references and the details can come across that way.

[00:26:26] I look at, This podcast being the passing the baton to the scout team where others who are much better communicators to the general public can do so, or maybe we'll make an HBO or Netflix documentary on energy blindness and systems blindness. I can't do everything and I've become comfortable with the fact that I can just be myself and do what I can and communicate in the way that I am able to.

[00:26:57] I mean, doing this little reflection, this is easy for me. This is not much effort. For me to convey this to the general public, that is a massive higher bar. Because there's not only the facts of our situation, but if you were to convey something of this magnitude, there has to be directional paths of what to do specifically.

[00:27:20] And I'm still figuring it out myself. So your question is noted. That's my current thinking on it. I feel that a change in consciousness is essential for a desirable, viable future to manifest. And yet the first obstacle is expanding the Overton window. Which approaches can help us get through people's cognitive biases?

[00:27:40] By the way, I hope you can find time to finish reading The Matter with Things. I'm in the middle of it and savoring every page. I don't know how to get through cognitive biases. I think we all have them. The list of cognitive biases is as long as my arm. I think being authentic and reaching people in a place where they care about dogs or birds or rivers or sunsets or tacos and finding out what their hopes and dreams are and something good or bad that happened to them in the last six months and reaching them as humans.

[00:28:20] And then going to these larger politically charged topics. I continue to find people that don't understand or agree with global heating, and you can explain the science of what it is and they will understand it. But as soon as then you go into what do we need to do about it, use less or carbon tax or whatever, then they reject the whole premise.

[00:28:47] And this is a challenge. I don't know is the short answer, but I think starting from a place of authenticity helps. And I'm not very far through the matter with things, but it is one of the six books on my nightstand. As the meta crisis accelerates, more and more people are seeking community, be it in the form of climate change aware life pods, regenerative permaculture communities, or other islands of expertise.

[00:29:11] Experimentation and coherence. My question revolves around this specifically, how best to organize in preparation for The Great Simplification or whatever comes next, what infrastructure is needed in terms of land and materials, governance, finance, data, information, technology, creativity, and spiritual mental health support systems.

[00:29:32] Frankli's every day on that. I think it starts with conversations locally with like minded people. You build the social capital first, pro social prepping as a shorthand. I will do content on the specific infrastructure type of things that you

talk about, but the challenge is, those have to exist concurrently with the growth based superorganism and all the narratives that accompany it.

[00:30:03] So by the time we really need these life pods, as you say, we may not get much warning. And until we, until then, it's going to be Disneyland, smorgasbord, watch football, and go to Home Depot and get whatever you want imported from around the world. So I think the very first thing is to, and maybe I can help with this, some primer on here, watch this two hour series of videos.

[00:30:30] and then discuss with people in Topeka, Kansas, or Bemidji, Minnesota or Chicago. Maybe that's the way to start. But it's a good question. Have you considered hosting a guest who is less sympathetic to your views than the average Great Simplification guest? I'm not suggesting a sensationalized debate, but I think a dialogue with a more eco modernist type could be helpful.

[00:30:57] Perhaps Hannah Ritchie, William Norhouse, or a similar figure. One of my main concerns with your content is there can be a bit of an intellectual bubble. Usually your guests agree with your analysis more or less. For the record, I agree with your analysis, but I'd like to see what is created by adding some resistance to your thoughts.

[00:31:15] I also think it would broaden your audience and lend credence to your ideas if they stand up to informed good faith criticism. Here's my thinking on this. I think a lot of people like Steven Pinker who point out how great things are in the world are backward looking until 2020. He was correct that there was less poverty in the world every single year.

[00:31:37] And that was in the backs of the carbon pulse. COVID changed that. But what I'm talking about is forward looking stuff. That once energy depletes and once a credit is not freely available and once we lose the stability of the Holocene because of the planetary boundaries and the social contract and the complexity, we can see those things in the not too distant future.

[00:32:02] distant future. So there's the forward looking. And then the other issue is one of boundaries. You can have a narrow boundary analysis and be correct, but this podcast covers a lot of super wide boundary things. So because of who I am as

a human, I don't like to argue and debate. I'm certainly not going to invite someone I'm by, podcast, and try to shred them and say, no, you're wrong about this.

[00:32:30] Even, I mean, people that I've had on that I disagree with. It's my role to give them the mic and ask good questions, but be respectful. And let them share their worldview. It will be up to other people that are more antagonistic to have that sort of. Conversation on their own podcast, on my own podcast.

[00:32:51] I don't plan on doing that. I want to have people who are credible, who are good people, and who have something relevant to say to The Great Simplification. Having said that, I agree with your general premise and I am willing to go on anyone's show to debate, well, I don't really even like the word debate, to just have a discussion on the systems ecology of what we face, the boundaries of analysis, the stakes of our times, how energy and systems blindness have misled us into simplistic um, narrow views of future trajectories.

[00:33:28] Maybe I'll, One day be invited to Joe Rogan or Lex Fridman or others. I'm happy to do that. I'm just an email away, but I don't think I'm going to have contentious debates with people I disagree with on this program. If I do have people that I disagree with, I will let them highlight their views and it's probably not going to be super contentious.

[00:33:55] So that's my honest answer to what you were saying. Being in the Midwest, probably not too far down the road from you, I am seeing and hearing about a rush of activity as farmland is turning over to corporate hands and being turned into data centers. This is undermining much of the beautiful regenerative and conservation work that is being done in this area.

[00:34:16] What kind of local collective action could be taken to stop these types of things where we see them locally. This is so true. My girlfriend's daughter just bid on 11 houses and was outbid on every single one. The land here in Minnesota and Wisconsin, people are buying it up, not to build a homestead, but it's because as We print more money to offset our shortfalls.

[00:34:45] The Cantillon effect, those people that are near to the monetary spigot have to invest that in things that are tethered to something physical, commodities, land, gold, Bitcoin, et cetera. And so yes, this is a real phenomenon that the

common person is going to get priced out of real estate and land. And I don't know the answer to that, but it's specifically to your question, I think to have local constituency that says we can't sell this land just for a data center or for a new airport or anything that is two standard deviations, two standard deviations out from the flatline business as usual perspective.

[00:35:34] There needs to be local voices about this is our place and the ecosystems that we care about and the land that is where we and our children grew up and our grandparents grew up. There needs to be something that's non monetary a consciousness, a pride defense of the natural areas where you live.

[00:36:00] I don't know how to do that but I think it's important. You and a colleague have said that renewables can power a civilization, just not this civilization. What would a renewable powered civilization look like? Some practical boundaries would be helpful. I think the average American, or person living in the United States I should say uses 10, 000 watts continuously, so that's 100.

[00:36:30] 100 watt light bulbs. That is not sustainable. So, what we're trying to do with renewables right now is plug and play, get rid of the bad energy, put in the new energy and keep our current footprint at this size and actually grow it. Not only here, but globally. That's the cultural carrot we're being told.

[00:36:50] I think many people in the world live well on a fifth of that footprint. So I would like to look and interview people on a 2, 000 watt society or a 500 watt society. How might such a thing be organized? I think to have solar panels. available for everyone, to power things but not the things that we need all 67 gadgets plugged into my house at one time, which is what the average house in the United States has over 60 gadgets plugged in.

[00:37:29] So I think solar could be a big part of a more sustainable future with less. consumption. The problem is how do you plan for such a thing? Because the market won't allow shrinkage of people's footprints that way. People have to choose that. People have to self organize around lower community, lower consumption communities.

[00:37:55] Maybe those can be documented and broadcast out as examples, as pilots. Holy cow that was a little bit longer than I intended and I didn't even get to

a fifth of the questions. I hope this was useful. Maybe we'll do this again in, in the next few months. I want to be helpful to you, my supporters, my tribe around the world.

[00:38:19] I'm grateful for your support and interest in the stakes of our times. We are not alive that at a normal time to be human. And I'm hopeful that this conversation scales and something emergent happens. Thanks. I'll talk to you next week.