Nate Hagens (00:00:02):

You are listening to The Great Simplification with Nate Hagens. That's me. On this show, we try to explore and simplify what's happening with energy, the economy, the environment, and our society. Together with scientists, experts, and leaders, this show is about understanding the bird's eye view of how everything fits together, where we go from here, and what we can do about it as a society and as individuals.

(00:00:34):

Giorgos Kallis is an ecological economist and a political ecologist working on environmental justice and limits to growth issues. He is a professor at the Catalan Institute for Research and Advanced Studies in Barcelona, Spain.

(00:00:52):

In this conversation, Giorgos and I discussed the science and philosophy behind the degrowth movement and some of the challenges behind implementing such an enormous task within nations and globally. As viewers of this show know, I don't believe mankind is going to plan for degrowth, but that post-growth reality is coming to a nation near you very soon. So in my opinion, the larger purpose of degrowth scholarship is to act as like an Overton window to get more people thinking about planning and maybe reconsidering their trajectories into what will eventually become a post-growth world.

(00:01:36):

I am pleased to introduce Professor Giorgos Kallis. Let's get to it.

(00:01:41):

Kaliméra, Giorgos.

Giorgos Kallis (00:01:58):

Kaliméra. Hi, Nate.

Nate Hagens (00:01:58):

How are you?

Giorgos Kallis (00:01:59):

Good. You?

Nate Hagens (00:02:01):

I only know a few words in Greek and most of them are swear words. You are Greek living in Spain and doing this podcast in English.

Giorgos Kallis (00:02:13):

Yeah.

Nate Hagens (00:02:13):

How many languages do you speak?

Giorgos Kallis (00:02:15):

Three, actually. Those very three, Greek, Spanish-

Nate Hagens (00:02:19):

These three.

Giorgos Kallis (00:02:20):

Yeah, and English.

Nate Hagens (00:02:22):

In preparing for this, we're going to talk about degrowth and your recent book and your recent papers and your work, but related to degrowth, I had a thought that the United States has the richest geological province in history and we have the world's largest economy, we have the seigniorage from the US dollar, but there's also this lingua franca that it's a novelty that I took French and Spanish in college, but people in Europe, they speak multiple languages all the time. What's that like having to do your work and your papers in English which is not your native language? I mean, it's like an extra burden when you're growing up and working, or how do you all manage that?

Giorgos Kallis (00:03:16):

Yeah, when you grow up, it is a problem. It's also a class thing. If you're from a high class in your country then somehow English will arrive naturally to you. The lower you go down in the ladder, the more of an uphill struggle it is. I was in the middle, so let's say it wasn't easy, but it wasn't also very difficult, as difficult as it is for other people I encounter here.

(00:03:38):

So for me, I did private classes. I wasn't very good until I studied abroad, then I started practicing. But I don't think it was until after my PhD that I went to the US and I met also my wife and I kept talking more and more English that my English improved. So it took years for them to improve.

Nate Hagens (00:04:00):

Are you teaching your children all three languages?

Giorgos Kallis (00:04:03):

Yes. So I speak to them strictly Greek. My wife, she's Mexican, but she grew up in the US, so she speaks to them English. Then our caretaker that helps us speaks Spanish. Then in school they're going to learn Catalan, so they're going to beat me by one language.

Nate Hagens (00:04:24):

I love languages. If we weren't facing a post-growth world, I think I would've been a linguist. I studied Chinese and then had some French and Spanish. But I just think the evolution of human language is fascinating.

(00:04:38):

So let's get into it, Giorgos. Many previous guests on this platform have covered this topic, but could you articulate your flavor, your assessment of the linkages between the energy, materials, technology and growth? What's your overall worldview on that?

Giorgos Kallis (00:05:01):

Yeah. For me it's quite straightforward and it's the basis of ecological economics that we understand the economy as a process of converting resources into useful goods and into waste. So in that sense, the more the economy grows, the more resources in one way or the other it's going to need technology mediating this relationship, but there is up to a certain extent that it can mediate it. At the end of the day, a compound growth, which is 3% per year, which means an economy 19 times bigger within a century, will use more and more resources. So we see a direct link between the growth of the economy and the need for fresh and more resources.

Nate Hagens (00:05:48):

So you're not a devotee of the decoupling camp?

Giorgos Kallis (00:05:54):

No, I don't believe. I mean, I do believe that certain resources or certain pollutions, certain forms of waste, can be reduced while the economy grows. But the more fundamental these goods are or these resources are for the economy, the harder is this decoupling.

(00:06:14):

Now fossil fuels is a border case. I mean, it's super fundamental. The whole industrial revolution happened because of fossil fuels. Fortunately, there are renewables or other forms of energy, but the economy is quite coupled with fossil fuels. I think there can be some form of decoupling, absolute decoupling also, but I don't know if it can happen fast enough in order to avoid catastrophic climate change.

(00:06:41):

Now, if we talk about energy or resources in general, I don't think that absolute decoupling is possible. So the more the economy grows, in one way or the other it's going to use more energy and more resources. Using better forms of energy or better forms of resources is possible, but again, up to a limit. Because if the economy is 19 times bigger within a century and then I don't know how many times, hundreds, within two centuries, even a relatively benign form of energy starts having a cumulative impact.

Nate Hagens (00:07:15):

I agree. Later in this conversation I'm going to talk about something that you and I both agree on even though we haven't spoken about it, which is we can and hopefully will decouple our wellbeing and our experience of life from energy and material use. I know in your new book you've written about that.

(00:07:39):

But first, let me continue to set the table here. You are known in the degrowth movement - and the degrowth movement is diverse - can you give me your own interpretation or your own definition of what degrowth means when you say it? What does it mean and how might it come about?

Giorgos Kallis (00:08:01):

We can think of the substantive definition, which is on the one hand it points to a process, and on the other hand it points to a critique. So the process it's pointing to is an egalitarian and just social and political transformation, but it's end result is a radical reduction of resource use. By resource, I mean material resources and energy. But the important is to put the, how do you say, the horses before the truck, and also the horses are that you need the social and political transformation whose result is going to be this dramatic resource and energy reduction.

(00:08:41):

Apart from that, degrowth also is pointing to something else, it's like the world decolonization, which it's against the idea or the ideology of growth. So it's also a set of ideas that are coming together to launch a very strong critique against the social and material effects of growth, but more than that, to the very ideology of economic growth that we argue is something like what religion would be for a religious society. So it's like a taboo totem that cannot be questioned, that everyone has to agree that it's good and it's not to be challenged.

(00:09:18):

So degrowth is both this challenge of the ideology of growth and it's also pointing to a particular process of social transformation towards much less resource use.

Nate Hagens (00:09:31):

So speaking about the religion part, degrowth is a word that post-growth, market, technology focused people really dislike. Why do you think that is?

Giorgos Kallis (00:09:44):

Yeah, post-growth, we're doing well. I mean just got a big project with the word post-growth in it, so we are using it.

Nate Hagens (00:09:52):

Yeah, I saw that. Congratulations.

Giorgos Kallis (00:09:54):

We're using it every now and then when we want to be a little bit less confrontational.

Nate Hagens (00:10:01):

By the way, I'll chime in and say from my perspective I see it as degrowth is what we should do and post-growth is what we're going to have to do.

Giorgos Kallis (00:10:12):

That's a good way of thinking about it. I mean one way or the other we will have to manage without growth and degrowth in a way, it's a harder challenge.

(00:10:26):

But speaking about why would technophiles or green growth people would not like degrowth? Because in the general imaginary, in the general common sense, I would say of all of us, now economic growth, we tend to think of this process that happened after the Second World War, mostly bridges, highways, spacecrafts, airplanes. So you have associated that as being a economic growth that came up with an explosion of new technologies and new ways of doing things.

(00:11:06):

So in their view, to criticize that and go against that sounds like backpedaling, no? Like retrogressing, saying no to all this and saying we're going to live some simple ways that they were before the Industrial Revolution and that this is wrong. But of course that's not what we are arguing, but I can explain their reaction to that in the sense that they feel that we are challenging all that and that a different form of all that being renewable energies, geoengineering, or other forms of technologies that could emerge now that they believe would be the salvation and that we are turning our backs to that for something that it's untenable politically and socially. That's what I see as the criticism.

Nate Hagens (00:11:56):

So when most people hear the word degrowth, there's a connotation that happens. What do you think the average person gets wrong when they hear the word degrowth or see a degrowth article or something like that?

Giorgos Kallis (00:12:15):

Yeah, I mean it depends on what article they see and how the author of this article frames it. I mean, if they just hear the word, again, it depends always on context. Words never work on their own outside of a particular context, it's always a person saying something. So it's one thing if I say degrowth and they hear it, and another one if a generalist says it dismissively on the TV, or another if, I don't know, someone from a think tank or a professor who wants to completely deride what we're saying says it. So the context of how it'll be presented makes a big difference.

(00:12:53):

But let's say a negative reaction to it can come from what I said to the extent that we associate growth with a good period in the global north, in the Europe and North America after the Second World War where growth has generally been perceived as elevating people from low incomes to a middle class, and

if this was growth and you want to reverse that, you want to go back, then you want to do something bad. So it might sound as something negative.

(00:13:24):

Or if you understand degrowth as the period where the GDP declines or when the economy has recessions and depressions, again within a growth-based economy, periods of no growth are very problematic, they're very unstable. So for all of us, there is the association of where the economy's not doing well, we don't want to be there. These are not nice years. So if that's what you mean by degrowth, the reaction is I don't want that. No, I'm not part of it.

(00:13:56):

I think both reactions are misplaced. When I'm the one explaining, I can explain in the sense that first of all the glorious period of the 30 years after the Second World War has come to an end 30 years after the Second World War, more or less, with the 1970's crisis and we are 50 years after, and for this 50 years growth has not been a marvel or a miracle. On the contrary, we've seen increasing inequalities and no improvement in the quality of life. So if growth was good for a particular period of time, which could be, or it could be other things that coincided with growth, but it no longer is.

(00:14:31):

About recession, again, I would respond that yes of course we're not calling for a recession. We are calling for a different way of organizing the economy around human needs and obviously a model that would have to be stable in one way or the other. No one wants instability, unemployment, poverty in the name of degrowth. No one would advocate that.

Nate Hagens (00:14:56):

So how do you or we as a society implement degrowth in practice, especially in a geopolitical context, possible loss of hegemony for the United States, and maybe wars. Also, there's a financial aspect. The moment degrowth is implemented or happens, there's financial market crashes leaving less stability for society.

(00:15:24):

So in the degrowth movement, are there two questions really, which is what would a landing spot look like using degrowth research? That's question one. Question two, how do we get from here to there given the financial overshoot and the complexity in our current world?

(00:15:43):

Do degrowth scholars separate those two questions or is it all kind of one?

Giorgos Kallis (00:15:49):

No, we start separating. You are asking actually the best questions right now. The best people on this field, we've finished writing a literature review article on the 50 years from the publication of limits to growth. Two of the most important questions that we think are underexplored that we identify, they are the ones that you very nicely highlighted. One concerns the geopolitics and what room, if any, there is for this type of futures that we advocate within reemergence of spheres of influence of a sort of Cold

War and geopolitical competition that has always been there but I think now it's more evident. There's very little thinking on that, but I know that there are international relations scholars that they now start grapple with these questions.

(00:16:43):

The other concerns financial stability and includes financial stability again in a geoeconomic context of if any country was to face prolonged stagnation or go in the direction of degrowth, especially if it goes let's say intentionally in direction of degrowth, there is the real fear of capital exodus, of punishment by international economic institutions bringing back in line all these things that can make a process that could be in principle or in theory smooth or stable can make it unstable within a matter of days.

(00:17:26):

So these are hard questions. I don't have answers to them and I would be hypocritical if I said I have answers to all that. But I think these are the questions we should be asking because the opposite is, okay, this sounds almost insurmountable, impossible, so let's try to think that we're going to do some technological miracle. I'm saying if we start from the premise that the technological miracle is not in the cards, how do we start dealing with these type of questions?

(00:17:56):

One potential first answer to what you're saying is that the system is already unstable and it's not because of degrowth. So geopolitical competition, possibilities of wars, worst wars than we've seen for a while, et cetera, are reemerging, and that's again within the contours of the current system. Also, the financial system in many ways has been unstable and many people keep telling us that it's a piling pyramid waiting to collapse. So again -

Nate Hagens (00:18:37):

It's waiting for collapse, it hasn't collapsed.

Giorgos Kallis (00:18:39):

Yeah. Yeah. Okay. Yeah, that's true. Many people might have said the last 50 years that it's waiting to collapse and it doesn't collapse. But I mean the amount of debt public and private right now is on a record level in comparison to what we are producing, so there is a question up to when we will be able to produce so much debt without-

Nate Hagens (00:18:56):

Because all that debt is a claim on energy one day.

Giorgos Kallis (00:19:01):

Yeah, it's a claim on energy. It's a claim also on human labor. It is a claim on future generations.

Nate Hagens (00:19:08):

So I don't know that you've read my papers and work, Giorgos, but how I see it is we won't voluntarily contract and we will continue to kick cans financially, rules, everything, to keep the financial system growing because of the necessity to pay back prior debt and the interest isn't created when money is created, but eventually we will run out of ways to do that and then we will contract involuntarily.

(00:19:39):

So the reason that I'm not directly in the degrowth movement is because I am trying to prepare society, individuals, nations globally for this smaller economy. I call it the Great Simplification. But the reason I'm a fan of the degrowth movement is because you are expanding the Overton window of the ways that we might choose to live differently using less energy, less materials, more social interactions, and things like that.

(00:20:11):

So to me, degrowth isn't going to happen the way that it's prescribed, but it's a good advertisement for researching and people thinking about living possibly substantially differently.

Giorgos Kallis (00:20:27):

Yeah, I think I agree with you. I mean, I don't think that it's going to happen smoothly and intentionally and voluntarily and somehow avert climate change. I think it's going to happen through conditions if it were to happen. It's going to happen through conditions of partial collapse and partial forced simplification.

(00:20:51):

I think it's important always in the face of historical changes to know what is it that you're proposing and what you're envisioning so that it becomes part of the reality that it's unfolding. Because if you don't have this counter narrative, so yes, my narrative is positioned within an understanding that the scenario you are describing is quite likely.

Nate Hagens (00:21:17):

So let's get into that. You recently are a co-author of a paper in Nature, congratulations on that, called Energy Requirements and Carbon Emissions for a Low Carbon Energy Transition. Can you give our viewers and listeners an overview of the purpose of that paper and the general conclusions of that paper?

Giorgos Kallis (00:21:39):

Yeah, I mean that paper was written by a PHD student of mine, Aljoša Slameršak, who developed and enhanced an idea that I had that no one has calculated how many emissions and how much energy we're going to use in order to make a transition to a low carbon system. Because building windmills, continuing to get oil in order to build solar panels, et cetera, is going to burn carbon as long as we still use oil, gas, et cetera. So no one had calculated that and no one had seen how much synergy we are going to use in this process and how much energy will be left for other societal users along this way.

(00:22:19):

So we thought about calculating it. We followed one approach. I mean there are many different approaches one could get to that, but we took the scenarios that the IPPC has produced, which are quite unrealistic, let's say by now scenarios of how we can stay within 1.5 degrees Celsius by 2050. So we looked at, okay, what sort of energy trajectories to do they foresee these scenarios and then based on that and based on some calculations called energy return on energy investment where it's a calculation of how much energy you need in order to produce a unit of energy by fossil fuels, by gas, by windmills, by solar panels. He also did very complicated calculations that I don't know what he did, but he did it well. The reviewers also say he did it well. So he did an amazing job there, we calculated that.

(00:23:13):

What are the core findings? I mean there is a good side and a bad side. So at the beginning I was more in a catastrophe mode and I was saying, "Just trying to do the transition we're going to burn all our remaining carbon budget and we're going to overshoot limits." So it's not that bad and it's definitely much better to burn this carbon to decarbonize than not burn carbon ever again, to put it simply, than to prolong this thing and go slowly and keep burning carbon for everything you need to do.

(00:23:44):

So in one sense it's not catastrophic, these numbers, but they're quite high. So we see that a substantial proportion of what we can emit and what energy we are going to use in the next decades is going to go purely for the energy system leaving less for the rest of society.

(00:24:04):

This is in a best case scenario that we really do something about climate change. Know that it's not at all the case right now. But we are saying, okay, even in this best case scenario, what would that mean? It would mean, I think that's what our research is showing, that we would have to use less energy for other things. Which is manageable, is doable, but I don't think it is. There is awareness around it in the dominant green growth narrative, which is we can use more energy, do more things, and at the same time do this clean energy transition.

Nate Hagens (00:24:43):

I have a lot of questions. I read your paper and I think it was a real novel approach. What you're basically saying is that if we are going to optimize for climate and somehow culturally we think that's important, which I'm skeptical that we'll do that, but under that scenario we have to massively increase the energy used to move to a different energy system, and that move itself will require a lot of hydrocarbons.

(00:25:18):

So my first question is you're actually asking the second of two questions, which is what would be the biophysical map if something would happen? But the first is the governance and market related question, and I know that's not your expertise, but I'm just curious because right now we are growing renewables quite rapidly globally, but we're still growing fossil fuels. So from a climate change standpoint, we're just extending the use of the fossil fuels because then we need a little bit less natural gas because we have more solar and wind, but the total emissions are high.

(00:25:57):

But how could we stop Disneyland and Las Vegas and Ryanair and all the other aspects of society that are using energy in order to invest that into a lower carbon energy system? What would be the mechanism that would allow us... I think in your paper you talked about 15 to 20% or something like that of current energy needs to be directed towards this plan. Is there any suggested pathway that could happen politically and economically?

Giorgos Kallis (00:26:38):

It wasn't part of this research, but it's part of the big research project we start now, the one we called post-growth still and it's going to be for six years. So there we are asking precisely the question you said. So one, we want to think of policies of doing something let's say that happened during the lockdowns, but doing it in an organized way, definitely in a more participatory way and a more accepted way, which is to prioritize essential from non-essential activities and use the power of regulation of policy, et cetera, to restructure the economy towards the activities that we consider essential rather than the ones that they are unessential in the context of climate change and energy transition.

(00:27:28):

Now yeah, that's the idea, that's the scientific part, now the political question is very difficult. How would you imagine closing down Ryanair or Disneyland? That's not in the safe cards right now and it's not going to be anytime soon but I think it is important to think of the processes and the mechanisms through a relocation of energy to the important factors that are going to be.

(00:27:54):

But I don't know if you have thoughts on these hard political questions.

Nate Hagens (00:28:02):

I'll say this, I have a lot of questions for you, Giorgos. They're going to sound like they are critiques or hard questions, but they're under an umbrella of deep respect and thanks for your work. Because as you just said, we need to understand this and ask these questions passing the baton to more people to get them involved because this is what we face. I don't see an easy way out of this so you have to be doing the research and asking the questions.

(00:28:34):

I think we'll keep kicking cans and then respond and hopefully there's models and pilots of living differently, using energy differently. Which brings me to my next question. Does this have to be a global thing or could Spain or Greece or New Zealand do their own degrowth move towards more renewables, less fossil fuels in tandem with a smaller economy?

Giorgos Kallis (00:29:03):

I want to think that each country can do something to the extent also that, as you said, in a post-growth context they might be forced to adapt to that. I mean you have Japan, 30 years without growth, this

becomes the new normal. So one way or the other countries have to accommodate the fact that they might not be able for their economies to grow and at the same time accommodate the fact that they have to do something about climate change unless the whole world comes to ruin. Which is a very possible scenario as you were saying. But this combination I think forces even individual countries to think differently.

(00:29:41):

Now for something more organized and more like the development of a different economic model or a different social organization model of reorganizing activities, et cetera, I think it's to go really outside of the main path right now I think you need regional clubs or associations. So I think the EU could potentially do something like that, as the US could do something like that as a big country, or the US with Canada. Greece alone, I doubt it. I mean Greece alone tried not to pay its debts and was brought in line quite quickly, so I don't think a small country can do it alone.

Nate Hagens (00:30:22):

Just as an aside, last night I discovered the analytics for this channel and of the 15 most popular cities with people watching this podcast, seven of the top 15 are in New Zealand or Australia. From a population standpoint, that makes no sense. But I think it's because they are at the end of the supply chain and they recognize emotionally the things discussed on this podcast with respect to climate change, degrowth, energy scarcity. I don't think the United States is going to take the lead on anything degrowth ever, but I do think smaller countries could act as models.

(00:31:11):

I gave a presentation to the government of Sweden last week and a couple months ago the government of Finland, and I think the Ukraine-Russia situation has all of a sudden put energy and the future prominently into many minds, especially in Europe.

(00:31:29):

Have you noticed since the Russia incursion into Ukraine more interest and intensity and urgency in your field or other people outside of the field suddenly paying attention to it?

Giorgos Kallis (00:31:44):

Yeah, I've seen, but I wouldn't put it to the Russian invasion. I mean I think it starts with the pandemic and the lockdowns and also in a context of complete stall in relation to progress with climate change. So I think it's many things coming together.

(00:32:03):

I think the pandemic psychologically had an important effect in the sense that we show, okay the biophysical world can hit us, it's not just scientists saying out of their minds that. I mean I was someone who never cared about pandemics, right? I was saying this is one problem too many to worry about. So in that sense, I was a denier in something that hit us. People were saying it's very likely, it's becoming more and more likely. I was like, well yeah, okay.

(00:32:37):

It did happen. We saw our fragility and we realized more and more how fragile we're going to be to climate change, which is an even bigger thing, and how little we are doing. So I think there is recognition, even by those who deny or want to delay, that there is a recognition that something is not going well.

(00:32:59):

Now then on top of that you have the Russian invasion. Then you have prices going up the roofs. You have a resurface of nuclear threats and potential nuclear war. So the whole thing is coming to an explosive mix and in that sense I think people right now are a little bit lost of certainties and this has opened up space for ideas that they were considered too heterodox to be given space five years ago.

Nate Hagens (00:33:29):

In the same way that Australian and New Zealand are, or at least the people following this podcast, paying attention to energy economic decline sort of scenarios, do people in Spain get the immediate, what's called an availability cascade, the salience of climate change because it's so hot there? Plus when you had the limits this summer of where you could only have the air conditioning to a certain level. Does the general person in Spain absolutely believe in climate change and is worried about it and wants to do something about it?

Giorgos Kallis (00:34:09):

I would say believes, I wouldn't say wants to do something about it, and I don't know where would it rank in terms of priority of problems. But I say the common sense now is that the climate is changing, and that's among everyone independent of political beliefs, at least in Greece and Spain that I talk.

(00:34:30):

It's very hard to deny it anymore, you know? The summers are much hotter, then you have some freak events, and here it's December and the first cold days were like two, three days ago. So people see that the climate is changing. It's still not a devastating change, it's still something that seems manageable if it were to stop here, but people more or less understand what we are saying that this is not going to stop here. We haven't stopped emitting carbon so this is going to get worse and worse.

(00:35:04):

So I think there is an understanding of that, that it's quite assimilated, but I don't think there is an awareness or an acceptance that something radical has to be done. I don't know, that's my hypothesis, but my hypothesis is that most people are aware of that tension.

(00:35:24):

So if I want to use a metaphor, it's like when you know are still sleeping and you know that you have to wake up seven o'clock and do something terrible that you don't want to do but you know it's coming. But you're still sleeping a little bit and you wish you could sleep forever but you know that at 7:00 you have this terrible wake up. It's this feeling and then you don't feel well about it but you don't want to think about it also.

Nate Hagens (00:35:49):

Well, right now it's metaphorically 6:30 AM, Giorgos, and we want to hit the snooze for 10 more minutes, but seven o'clock is coming soon. I'll point out, I can't move my camera at the moment, but it's -20 Celsius here and people might say, "Oh, see? What climate change?" But that too is probably caused by climate change with the polar vortex letting the arctic air come down here.

(00:36:17):

So getting back to your Nature paper, that paper outlined three EROI, energy return on investment, scenarios, high, medium, and low. Some would argue that even the low EROI scenario is optimistic. First of all because it starts with an average of already calculated current EROI figures for renewable energy. The higher end figures in that batch are disputed by some as unrealistically high, so that would skew the average of the low EROI scenario into optimistic territory. Then the low EROI scenario projects a rising energy return for all renewable technologies. But would a rising EROI for renewables actually happen under conditions of global declining resource quality and declining fossil fuel EROI considering, as you said earlier, that fossil fuels will be supplying energy for the construction of renewables throughout most of the transition?

(00:37:26):

So my question is why didn't you include a truly pessimistic, or some would say realistic, EROI scenarios more in line with your colleagues 200 kilometers to your west, Capellán-Pérez at Valladolid University. I can never pronounce that name. Any comments on that?

Giorgos Kallis (00:37:52):

I mean the technical details of that Aljoša could better say it because he's the one who really studied the numbers. He knows the literature and he thinks our scenarios are reasonable. But I mean behind every paper there is also a story, and the story of that was that one of the reviewers was very strong that our low EROI scenario is not... We had one low, with basically low was taking the lowest estimates of the estimates of EROI right now as the basis for the low EROI scenario. But then one reviewer was insisting on the point that even the low right now have been proven wrong and it's better to take the medium and we had a long debate about that. At some points when you-

Nate Hagens (00:38:45):

It's almost a religion, right? There are pro-renewable fanatics and there are anti-renewable fanatics, and I believe the truth is in the middle. Renewables have arrived, they're robust, they're scalable, they are incredibly EROI positive relative to energy sources that humans have used in the past, but they're not going to power this civilization.

Giorgos Kallis (00:39:11):

Yeah, but I-

Nate Hagens (00:39:12):

I believe you, there's huge politics behind the paper.

Giorgos Kallis (00:39:15):

No, there was a politics, and no, I mean one of the reviewers, I don't think he was a renewable energy evangelist but just thought that the low EROI values are unrealistically low. So I insisted on the point that we should have the medium ones for our low scenario. At the end, it's not the politics, but it's like, okay, do I want to risk the whole paper not being published or am I fine to do with a medium? We were fine to the extent that also when we were including the low EROI values it wasn't that the result was very different. So the scenario was not changing, so it wasn't a dramatic change given the low EROI values we had. So it's not that we diluted our findings or our methods for that.

(00:39:56):

It's always a give and take in this process of publishing. There is this nice cartoon which says, "My paper before and my paper after," and it's a car, and then the paper after is like a car with the exhaust up in the window, et cetera. Unfortunately it's a little bit of that, but yeah.

Nate Hagens (00:40:14):

Believe me, I know. My superorganism paper had much the same feedback.

(00:40:18):

So here's how I see it, tell me what you think of this. So all of these prognoses and forecasts and technological predictions happen during a time when our energy was growing every single year. We use a hundred billion barrels of carbon every year, coal, oil, and natural gas, and that roughly works out to around 500 billion human laborers added to the economy. So now we can use some of those laborers and invest them to make new low-carbon laborers in the form of solar, wind, geothermal, et cetera. But very soon for the first time in the last century plus that 500 billion of laborers is going to be declining.

(00:41:06):

So as it declines, then we have the financial overshoot question, but setting that aside for the moment, how can as that declines the EROI of those other things go up enough to offset it?

(00:41:26):

Then another thing we haven't talked about is complexity and the six continent supply chain of how everything is fit together. I know you're just trying to set the table for these questions, but I am curious about as the total amount of coal, oil, and natural gas declines pretty much year over year at some point in the future how renewables can fit that gap, even if they are let's say 10 to one wide boundary EROI, something like that. Which arguably on the surface is higher than some fossil fuels, but then there's the energy quality differential as well.

(00:42:04):

So do you have any thoughts on all that?

Giorgos Kallis (00:42:06):

No, I mean there is a huge transformation. I mean, what you said at the end is really important that also the energy productivity or the EROI of fossil fuels right now it's probably lower than we thought

and it's close to renewable energy. So in that sense, it's not as fundamental a problem as we thought before when we thought that, okay, the EROI of fossil fuels it's much higher than renewable. So if it's close, the transition's probably easier on that side, but then there are all the problems that have to do with the quality, the reliability, the intermittence of the renewable energy, all these problems that people are talking about. And the overall problem, which is that we have to use generally less energy for other environmental reasons and also for making this transition possible.

(00:42:58):

So there I follow the type of work that my colleague Julia Steinberger is doing and with whom we're going to collaborate, which is trying to think how can we secure nine billion dignified lives with fraction of the energy that we use right now? Is it physically possible, biophysically? I think her research demonstrates models that it is biophysically possible. Then once you get into the political questions, how do we get from here to there, it starts getting tricky because probably there's no space for-

Nate Hagens (00:43:32):

Can you link your project with Julia on the post-growth with some... Do your work, but link it and form alliance with some political scholars on governance questions and how this might unfold? Or is that too complex?

Giorgos Kallis (00:43:50):

No, I would like to. I'm open to suggestions with whom to link it. I mean, I'm responsible for the package and politics. I'm not a political scientist. I call myself a political ecologist, so I'm interested on how power relations govern access to resources and resource distribution. But yes, it's a huge challenge and it's more like I'm jumping into water without knowing what I'll find because I don't think there are many people thinking about these governance and political questions. I know that they're the most important questions so it's an important, exciting, but also frightening research on how we're going to grapple with these questions without saying something either trivial or completely utopian, because we have to say something that is also actionable.

Nate Hagens (00:44:38):

Yeah, I love that philosophy I have to say. I agree with you, this is really, really hard. I want to ask one more hard question about this paper and then I'm going to move on to your new book, which is kind of the meat of this conversation I hope.

(00:44:53):

I doubt you read my PhD thesis 15 years ago, but I wrote a paper that was in Ambio about multi-criteria analysis on EROI, that when you just focus on energy, sometimes you neglect other important natural resource inputs like water or materials or copper or things like that. So in the various EROI scenarios, did you look at the potential if we have enough energy for renewables does something else potentially become limiting, like copper or lithium or cobalt or nickel? At the levels required to feed nine billion souls in some sort of a reduction of our material energy footprint do some other elements become limiting? Is that a question you've thought about?

Giorgos Kallis (00:45:49):

No, it's a great question. It's not something we looked in this paper. So in this paper we just stayed on energy and emissions. But the group you mentioned from Valladolid with a different model that it's also designed to ask these questions, I think they're addressing precisely these questions, what material requirements are going to be in these energy scenarios. Also the geography of these materials. Where are they going to come from?

(00:46:14):

Because one question is the scarcity, whether there's going to be enough of these materials. Another that is very close to home here because a big group with which we are in the same institute and with which I'm collaborating under Joan Martinez Alier is looking at all the conflicts and the violence that is taking place in this so-called commodity frontiers. From the places that we don't see and where all these resources are coming from.

(00:46:42):

I think it's a super crucial question and it's one that should be on the front of any program for just energy transition but just that has to think also of the implications of where these resources are going to come from.

Nate Hagens (00:47:02):

Yeah, I mean this gets back to the morality of all this is if all of a sudden the global north decides we must continue to grow for the next 30 years, and that growth is going to have to come from as we decarbonize we're going to have to rematerialize, as Olivia Lazard says, and a lot of that rematerialization is going to be from countries that are in the global south have climate impacts, have civil strife, and what are the ethics of that? Hardly anyone is talking about that.

Giorgos Kallis (00:47:38):

Yeah, what are the ethics and what are also the geopolitics and the economics of that? Because it seems that they might also not be willing to sell as cheap as we want them up here, and then what's happening? So that's also for me what's frightening because if you read these discourses about the new realignment now and Europe and the North America versus China and Russia, et cetera, you see that on the back of the minds is unfolding war over access to resources.

(00:48:17):

I mean, it might come the other way up to the north, like the global south is not just anymore in the subservient position it used to be and it might demand its use for releasing this resources.

Nate Hagens (00:48:31):

Yeah. So many questions.

(00:48:34):

Okay. You recently wrote a book called Limits: Why Malthus Was Wrong and Why Environmentalists Should Care. What were the core messages from this recent book, Giorgos?

Giorgos Kallis (00:48:51):

Yeah, we are turning the page, because in this book-

Nate Hagens (00:48:55):

Well, there's a lot to cover in a short conversation.

Giorgos Kallis (00:48:58):

Yeah, yeah, yeah, I know. I like that. I like that. It makes me reflect on my fragmented, not call it a worst name, personality and intellectual interest. Because I'm very much into ecological economics, biophysical economics, working with Aljoša calculating this and that era of that energy source. But then this book was quite a philosophical exploration, so some people sometimes are surprised that I'm the same person.

(00:49:30):

Then I have even discussions with people that they are very studious scholars of Malthus and then they ask me all these questions, "Did Malthus really say that? Why do you think that Malthus said that?" So it's very different worlds from calculating energy to arguing whether Malthus said this or that.

(00:49:46):

What are the core messages of the book? Let me put it in a direct way. I don't like Malthus. I don't like what he wrote. I thought they were very problematic in ideas that he wrote and I think these ideas have been carried toward this partly by the environmental movement that I see myself as part of.

(00:50:10):

But I never associated with these ideas. I was always surprised when people would tell me, "You're a Malthusian because you're in favor of degrowth." I was like, "I'm definitely not a Malthusian. I've read Malthus and there's nothing more distant from me than a English aristocrat who was against the French Revolution and wanted the poor people to rot in their poverty."

(00:50:34):

So that's the initial reaction. But then you might say I'm not a Malthusian and people will tell you still, "No, you are a Malthusian. You don't know." So I was like, "Okay, if I'm not, not because it's personal. Because if the ideas that we are talking here are not Malthusian, why are they not Malthusian?" So I went a little bit more in depth to study what Malthus has said, how his ideas have traveled over time to make an argument that within environmentalism there is another strong notion in defense of limits that it's not like, "Oh, we are running out of things and we should do something about it, but it's an idea that we are destroying the planet, we are destroying our own liberties, we are destroying our own quality of life, and we should organize in order to put a limit to ourselves, to limit our activity, to limit and channel our desires to paths that they are more constructive than destructive.

(00:51:35):

I try to separate two different ways of understanding limits and reclaim and defense this, may I say it's social, but it's not social because it also has a very strong biophysical component, which is we are

destroying the planet and we should stop destroying it. But that puts the emphasis back on us as agents of limiting ourselves and understanding that what you are calling a great simplification, simplifying the way we're, living with modesty, is also what the good life is about.

(00:52:06):

I call that self limitation. Collective self limitation. I could call it also simplification, but I wanted to play a little bit with the idea of limits and limits to growth. So I'm saying about we want to limit growth, we don't care if growth comes to an end and it's limited itself. We want to do that.

Nate Hagens (00:52:28):

Does collective self limitation start from self limitation of an individual and then scale or does it collective imposed on the self?

Giorgos Kallis (00:52:40):

No, I think it's coevolutionary. This is a term I learned from my mentor, Richard Norgaard of Berkeley, who had written about coevolution. So I think in many ways these dichotomies we make in a modern science way of thinking very often are because we are caught in egg and chicken situations that they're better thought as coevolution. So you need the one in order to fit in the other in order to fit the other. So they are building this way, unless you have people who want to live a simple life, you will never have a collective structure or a state that would promote a simple life.

(00:53:16):

Now, unless you have a state that opens pathways and lets people live in simple life instead of force them going in a particular way, you would never have the people who would be able to live a simple life and wouldn't be just a marginal radical ones. So you need that two and the one is fitting on the other and egg and chicken that it's getting bigger and bigger. But you need both.

Nate Hagens (00:53:42):

I agree with that. So if our needs, reproduction, and consumption can be internally limited, then nothing is scarce because we'll always have enough. What does it look like? What might it look like to internally limit resources?

Giorgos Kallis (00:54:02):

What would it look like personally? I think personally - it's personal of us can say what would it look to live a simple life within the contours of the life now? Then there is the question of what would it look like to live a simple life or a self-limited life within the context of a system permitting you to live in a different way?

(00:54:23):

So it's one thing if I live in California and I say, "Okay, I could limit myself and not have a car," but then I would probably die in my house because I couldn't go to the hospital, I couldn't go to work, I couldn't go anywhere. Just walking outside of your house is you need to walk 50 kilometers to reach the grocery

store, right? So this self limitation is not possible. Of course, if the city's organized, have the public transport, et cetera, then more self limitations become possible.

(00:54:51):

So I think there is the question of each one of asking within the current life and within the context and infrastructure that we operate, what will it be to live a modest life and know how to put limits to what we want and do what we truly want rather than what we are pressed and forced to do? That's one question. Then the second question is what would it look to organize things differently to allow us to live even more modest and simple lives in a good way? I think this is where Julia's work comes that tries to quantify and try to give a little bit of picture, okay, what would it look world where we consume 20% of the energy we consume now? What kind of houses would we have?

Nate Hagens (00:55:31):

So here too is a chicken and the egg. We need to each of us as individuals move a little bit in the direction of simplification and consuming less, but in tandem we need the culture to move and the infrastructure and things like that. The more that the culture and the infrastructure is aligned to smaller material throughput future the easy it will be for the chicken, us, to live in that environment.

Giorgos Kallis (00:55:58):

Yeah. Very important there is public infrastructures. So speaking of car, for example, if you have good public transport is one thing, or if you have proximity to your workplace is one thing, than if you don't have it. Then the car becomes almost a basic need. So you can say a car is a basic need in one context, but in another context it's not, and it's a huge difference in terms of energy emissions, everything.

Nate Hagens (00:56:29):

Right. So I am fortunate to have traveled a lot in my life, and of all the European countries I've been to, Spain is my favorite. Can't say why. The people, the food, just there's this vibe there. Now Spain, to my knowledge, uses half the energy per capita as the average person in the United States. Better healthcare system. If I got sick or injured when I was in Spain I could go to one of the Spanish hospitals. I'm not glorifying poverty or anything like that, but Spain seems to be closer to a degrowth model than the United States for sure. Why do you think that is and are there any examples in Spain of active pilots or communities that are at least going in the path that you and Julia are describing?

Giorgos Kallis (00:57:26):

I mean, Spain is the general difference of Europe compared to the US and the way I think that the big energy used. I mean, I studied as a water scholar and I was always water studies and I was always surprised, why is per capita water used in the US two or three times bigger than in Europe? What can you do? Then of course, it's a whole arrangement.

Nate Hagens (00:57:46):

A lot of flushing toilets.

Giorgos Kallis (00:57:48):

A lot of flushing toilets. A lot of toilets that use more water. Lots of gardens. Lot of houses that are big and then you have also the garden, et cetera, et cetera. Then when it comes to energy, again, it's the same, the way the cities are structured with a lot of private personal commuting with cars. These are fundamental different structures that explain the different energy use.

(00:58:12):

Now, Spain has very nice things in terms of urban model that they weren't done in the pursuit of the growth or anything, it's how the system has evolved. But probably what you are also describing as a positive social experience, which is pedestrianized centers of cities with good public transport that you can access them, walk around, and have a pleasant beer out in a plaza. This was not part of degrowth or it hasn't been part of degrowth or post-growth, but I think it is a model upon which you can build and at least a model that we can mobilize to resonate with people and say, "I mean, look, you can have pretty nice things for very little and you don't need much more than that." So there is a good basis here.

Nate Hagens (00:59:06):

That's what I meant. I know that Spain is not pursuing degrowth, but it's easier to do and say these things in a country like Spain. Degrowth, the words are kind of anathema to the United States experiment. At least for now. I mean there are pockets of people that are thinking this way.

Giorgos Kallis (00:59:27):

I'm not sure if it's easier anywhere. I don't fully agree with that. I understand what you're saying about the US, but the US, if we say the ideology of growth, the ideology of growth, we can call it also the American dream in the sense of the American dream of the 1950s of the suburbia, the cars. So this dream is quite prevalent everywhere. So even if in Spain it didn't take hold as it took in America itself, it's still an important part of the imaginary and it's still an uphill battle to challenge that and to challenge the idea of growth. So don't think that we have an easy task here.

(01:00:09):

Well, what I can say is that there are real lived experiences. So there is the square now, not everyone spend their time in the shopping mall. So there is the square and you can mobilize this experience to say there is something upon which we can build. But there is quite a lot of reaction here. There is reaction in Greece. There is reaction everywhere to our type of ideas.

Nate Hagens (01:00:34):

There's one Spanish cultural tradition that I wish the United States would adopt and that is the afternoon siesta.

Giorgos Kallis (01:00:44):

Nice one.

Nate Hagens (01:00:45):

So in your writing, Giorgos, you use a French word, dépense. Could you describe what it means and why it's important?

Giorgos Kallis (01:00:55):

Yeah, okay. As our ideas go, it's ideas that we've developed here in group with Giacomo D'Alisa, my colleague here, my coauthor, another Italian scholar and sociologist, Onofrio Romano, that incorporated this idea from a strange French philosopher George Pati, who has written very crazy, somewhat masochistic models, novels, and philosophies, et cetera. So a very strange and controversial character, George Pati, but a very original and unique thinker. Some people are appalled by what he wrote, others like Onofrio Romano from whom I took this idea say that there are things from Pati that they're so brilliant they can be useful even if there are many other ideas that one wouldn't share.

(01:01:44):

So one core idea of Pati is that societies make meaning and find joy, if you want, by expanding their excess. So rather than thinking in terms of societies being in a constant battle against scarcity, have to think like, okay, what is it that gives us pleasure? And at the end of the day, the pleasure and where we make meaning as societies is in expanding whatever surplus we might have. Surplus of energy. Surplus of human labor. And if you think that, I don't know, ancient Egypt was expanding the surplus to make pyramids and create a meaning as trying to reach the God with the pyramids, in a modern capitalist society or in the American dream, you might say you are expanding it in the shopping malls and in the cornocopias-

Nate Hagens (01:02:35):

Las Vegas and Ryanair.

Giorgos Kallis (01:02:36):

Yes. Yes. The cornucopia of plastic things around, et cetera, and the gas bottles, the cars. But we are expanding and it's important to understand let's say diagnostically analytically that's where societies make meaning and where they find joy, it's in their expenditure.

(01:02:55):

So we are trying with this idea to break a little bit the mold the society of the growth is only a society of restriction, of confinement, of doing less and less, and think where would we expand our extra energies? What sort of joy would we create by expanding the surplus? Less as it might be, there will still be a surplus above our immediate basic needs. Where would we expand it and how?

(01:03:25):

We take there the ideas of expanding it, that the importance is to expand it collectively. In collective fists, in collective knowledge, humanities, curiosity. But it's important to keep in mind this dépense, this unproductive and non-utilitarian expenditure. That you're not expanding in order to produce more in the future or do something else, but you are simply expanding and that's the moment actually that you're at your happiest, if we might put it this way.

Nate Hagens (01:03:56):

I love that idea for two reasons. First of all, you're a biophysical economist, so we have resource and energy inputs and resource and energy outputs that give us brain experiences, and right now a lot of that energy input, we always look at it as what does it produce? You and I and people in our network are in some ways peddlers of fear because we are talking about limits and that society's going to have to change, because for climate and energy reasons and many other reasons, including equity and some of the things you're working on, what we're doing now cannot continue. That is a fearful thing, but we actually need to lead with a carrot or something creative and hopeful.

(01:04:47):

Dépense, to me, my quick take on it is it's where can we imagine that we could expend our surplus in the future even if it's a smaller surplus? I often say that after basic needs are met, which for many humans they're not, but after they're met, most of the best things in life are free or close to free from a biophysical perspective.

(01:05:10):

So is that what you're getting at there?

Giorgos Kallis (01:05:12):

Yes. Yes. It's important, these things that they are free, to remain free and expend them free because this is where pleasure is coming. So the siesta you were saying, it's two hours that you're being very unproductive. You could stay and work and check emails, et cetera, et cetera, but you're being unproductive sleeping for two hours, doing nothing. You're basically nothing. But it's also a huge bonus to your quality of life and your wellbeing. It's precisely things like that that we need to recover the capacity to expand things that they are for free and expand them for free.

(01:05:49):

Because within capitalism is the opposite, it's like everything is squeezed in order to use it in order to produce more. So it's like how can we squash the siesta so these two hours that they are lost come back in the machine in the form of human energy. Human energy is also fossil energy because these two hours I'm probably in my office with the lights, et cetera, in order to produce more. So we're saying, no, just let it be, release it. We are happier and we are also using less of our human energy and of our fossil energy.

Nate Hagens (01:06:21):

I did want to offer my analytical take and also philosophical take. I have not been a Malthus scholar. I know that he predicted that exponential growth in demand would outstrip the geometric growth in food production and that we would have a problem. Well, he was wrong in my book because he didn't know about fossil fuels, number one. Then Paul Ehrlich and others 170 years later wrote a book, The Population Bomb, and Paul was wrong because he didn't know about debt and globalization. Then we hit another wall in 2008 where the central banks took over the role of commercial banks in propping up the monetary creation. Then COVID and we had this massive control of governments to stabilize the economy.

(01:07:12):

We're running out of cans to kick, in my philosophical observation, which is why I agree at the core of your work is the next can to kick is in our minds, that we don't need all this energy and stuff to live good meaningful human lives. Most of it is wasted. In my movie I say we're turning billions of barrels of ancient sunlight into microliters of dopamine, and I think serotonin and oxytocin and other of our evolved neurotransmitters have been deemphasized. So to go into the dépense or the siesta or other things, that is the stakes where we're at, is how can we culturally recognize where we came from, what we're doing, and where we can go? It's not going to be using more energy and stuff that gives us meaning.

(01:08:05):

That's my personal view on that. What do you think?

Giorgos Kallis (01:08:08):

No, a hundred percent agree. But I mean, I have a different interpretation of what Malthus said, but I don't think it's so important so I wouldn't stick with that.

Nate Hagens (01:08:18):

I can tell people to read your book.

Giorgos Kallis (01:08:20):

Yeah, read my book because Malthus didn't predict that and he was actually much closer to how economists think nowadays than we tend to think. I mean, the way you described what Malthus saw it is the way Ehrlich recovered him in the sixties, but I think it's interesting and that's what I saw in my book. To go and read Malthus without the glasses of failure in the 1960s and the debates we have now and read him in his own terms and then you see something much closer to an original economic argument about arguing in favor of growth in the name of limits and in the name of scarcity. Which helped me locate it there and I think it's a problematic trap that we still keep falling in as environmentalists.

Nate Hagens (01:09:07):

So quickly to summarize that, you think that my take on Malthus is popular and simplistic and probably incorrect, that there's a deeper nuance there that most people don't understand?

Giorgos Kallis (01:09:22):

Yeah, there's no problem I mean in what you said. I agreed in everything. So the way you said it, there wasn't any problem with that, and I'm not scholastic to say, "Oh no, but you shouldn't say that Malthus said that". But there is a bigger problem to the extent that there are certain environmentalists that reproduce a certain type of thinking that stems back to Malthus and to the way Malthus framed these ideas that can be problematic. So there it gets important to see what Malthus precisely said which is different from the way we often tend to think is what he said.

Nate Hagens (01:09:55):

Claro. Okay.

(01:09:56):

Final question before I get to my closing questions. Again, probably each of these questions could be an entire podcast. I noticed that one of your ideas is to eventually somehow tax resources instead of labor. This is something I've looked into quite a bit because I think that's one of the only viable long-term pathways. Can you just briefly expand on how and why this would work and how it might come about and any other summary thoughts on that concept?

Giorgos Kallis (01:10:29):

Having the economists in this question, they have developed quite a lot of thinking. I was in the PhD thesis of a student here from our department who's doing a new type of models around this idea and the implications and the different designs. But it's a pretty simple idea right now, the majority of tax revenues coming out of taxing our work, our salaries, et cetera, a different way of doing it.

Nate Hagens (01:10:52):

Like 95%.

Giorgos Kallis (01:10:53):

95%, yeah. I think we should tax also wealth a little bit more for equity purposes and redistribution. But apart from that, we can tax our energy use or our carbon use in order to raise the revenue and in this way, thinking now as an economist, you would incentivize activities that they are high in terms of their human energy or human value but low in terms of their carbon contact, because you would tax the carbon contact and you wouldn't tax the human labor. So in that sense it's a simple intuitive idea.

(01:11:37):

There are questions then of design, so how would you do it in a way that it's also socially progressive and not regressive? There are different designs, whether you would give money back as tax cuts to everyone, only to those working, whether you would give a basic income or a dividend. There you enter into models, you can study all these things. But I think the basic idea is very intuitive, very strong, and very correct.

(01:12:09):

The next question is why it hasn't caught up because it has been around for 20 or 30 years now, and it's not also a radical idea, let's say. It's an idea that even mainstream economists have toyed with, but still it has been difficult to push it.

Nate Hagens (01:12:28):

Well, now people are recognizing the validity of it, but every year that goes on the haircut that would have to happen on a financial system gets larger. So it becomes politically harder by the year even

though it cognitively becomes more relevant by the year. So I hope you and your new project can work on that.

(01:12:53):

Do you have 10 minutes or so more to do some final questions? Excellent. These are more on the personal note.

(01:13:03):

So given your lifetime of scholarship and reflection on these issues do you have any personal advice to the listeners of this show going into this time of global poly-crisis, potential post-growth living, et cetera?

Giorgos Kallis (01:13:22):

I mean, the advice I have to give them is the one I try to tell myself too, but it's live the way you want the world to be. So try to be consistent. In our book, we joke, we say in the case for degrowth book, we joke, we say less than four contradictions if you have in your life, you're a hypocrite. Antonio Turiel has said that here in Spain also. More than 10, you're a hypocrite.

Nate Hagens (01:13:49):

Yeah, more than 10, you're a fanatic. Right?

Giorgos Kallis (01:13:50):

No, less than four, you're a fanatic. More than 10, you're a hypocrite. So in between becomes how.

Nate Hagens (01:13:55):

Yeah, yeah, yeah. I didn't know that came from Antonio. Pedro Prieto uses that quote all the time with me.

Giorgos Kallis (01:14:01):

Yes, people here in Spain use it and I think it's a good one. Which is within the limits of knowing that you're going to have some contradictions, try to live the change you want to be and try to come together with others that they want the same change and organize and associate. I think that's the main advice I give and that's the best or the first steps that all of us can and should do.

Nate Hagens (01:14:24):

Not to sidetrack the conversation so much, but on the déponse topic, Spanish phrases are the most colorful, interesting, coolest phrases ever. There's so many of those little things, like "I am not really from Bilbao". If you're from Bilbao, it's like you're a tough guy and there's some joke about shaving. I've heard hundreds of them. They're hilarious. We don't have that in the United States.

Giorgos Kallis (01:14:53):

This one with the contradictions, we have to find the originator because I don't know, I keep seeing some of these people citing one another, but I don't know who coined it first. It's a funny one.

Nate Hagens (01:15:04):

I'll have Lizzy, the podcast curator, look it up. Yeah. So Giorgos, you are a college teacher and also a champion in the degrowth movement so you're teaching these things to students. What specific recommendations do you have for young humans who become aware of our climate energy equity biophysical constraints to the human enterprise?

Giorgos Kallis (01:15:28):

I would say don't depress and act. Live your life and organized to act. I hear a lot about climate anxiety, climate depression. I fully understand it, but I have to say that most generations living in this planet lived in pretty difficult times. So in bad times, we live in quite bad times, in some ways, in other ways, those of us living in the global north live in quite good times. The future is gloomy, but the future is always open. Many terrible things have happened for humanity in the past, but people have come together and they have overcome them, walked through them, created new things. So my main advice would be don't depress and act. Do what you can and organize with others to bring change. Now is not the time for depression.

Nate Hagens (01:16:26):

Do you have a good response from your classes at the end of the semester with your students learning all this stuff?

Giorgos Kallis (01:16:32):

Yes. Our students are quite a self-selected sample of people coming here to learn about degrowth, et cetera, so they are there. So I do get good responses. I did get a response from a student that she told me that after taking her masters probably she didn't know that much about degrowth before. So she interacted during her masters, she told me, "After I got the masters, I developed very high levels of anxiety and depression." So this has struck me a little bit as a challenge. How is it? Why is it?

(01:17:07):

Yeah, our material, I can understand why. Because the reality is hard to stomach and for us, because we work with it and we keep talking about it, it's like being in psychotherapy all the time. You keep talking about it so you neutralize it. If you first encounter it, it can be like a difficult encounter.

Nate Hagens (01:17:25):

That's exactly right. Two quick thoughts on that. One, not everyone is the same so there will always be a distribution of responses for humans coming across this. My reaction to a lot of my students, they found more depressing things in my Reality 101 course, but they didn't find them depressing because we processed it as a group, and to know the landscape, to see how these things fit together is actually really enlightening and helps with your neurochemical response to these things.

(01:18:01):

So I think it's the combination of having a community to discuss, like you were saying, we're working in this all the time, and an understanding, a clarity. It's comforting in a weird sort of way.

(01:18:16):

So Giorgos, what do you personally care about most in the world?

Giorgos Kallis (01:18:23):

Yeah. Right now I care for my daughters. I have two twins, they're three years old, so I really care about them. But I think also caring about them fortified my feelings of caring about the rest of the world because it's a great gateway to empathy feeling about how much I care for these two human beings and how much other cares equivalently for their human beings and how much we have to care for one another. So it kind of strengthened my feelings of care and empathy for others and for the future, especially of the young ones.

Nate Hagens (01:19:03):

That's beautiful. Of all the issues we've discussed or any other issue on your mind, what are you most concerned about in the world in the coming 10 years?

Giorgos Kallis (01:19:17):

Yes. I'm concerned about nuclear war, to be honest. Or a war between US and China. Yeah, I'm concerned with a faster collapse on climate, that then climate would come on top of its own on ruins. I'm concerned because I see like in Greek tragedy they say, "Well, what's the form of a tragedy?" The form of a tragedy is two actors, it's one looking at their own rationality and their own logic without any limit and then pursuing it to the very end to the common ruin, to the ruin of both actors, of both protagonists. There are elements in the current moment that you can see the superpowers pursuing particular logic to which one cannot see an easy way out of it, so that's what concerns me for the next 10 years. Yeah.

Nate Hagens (01:20:17):

Dude, we've got to talk more often. I only know of your work, we've never spoken before this, and we agree on almost everything you've said today.

Giorgos Kallis (01:20:26):

That's nice.

Nate Hagens (01:20:27):

I agree with you on that. So in contrast, what brings you hope in the next 10 years or so? What are things that you're hopeful about?

Giorgos Kallis (01:20:36):

I think there are openings and I think precisely because it's not a comfortable conformist era of things are more or less fine, why should we rock the boat? The boat is rocking a lot, so people are moving around and trying to find new meanings and new senses and I see more and more young people coming here abandoning careers in comfortable jobs in marketing, et cetera, because they feel they have to do something. So I feel something unexpected and big politically interesting will come out in the next 10 years. I don't know what form it will take, but I'm pretty confident it will.

Nate Hagens (01:21:16):

If you were a benevolent dictator or something similar and there was no personal recourse to your decision what is one thing, one policy, one thing that you would implement to improve human and planetary futures?

Giorgos Kallis (01:21:34):

I would abolish dictators and resign myself. I'm a very staunch Democrat. I mean, I'm not saying it like that, I was reading about Solon, who in my book about limits I try to explain the logic of self limitation and then go back to Ancient Greece. Solon instituted democracy in ancient Athens. He said, "These are the rules." So he was the most powerful person at that moment and then he says, "I'm exiling myself." So he got self-exiled and he said, "Because precisely me accumulating all this power that I have right now, and I could use it benevolently to say I'm going to stay here forever to protect democracy and to let it have its first steps and you really need me because I'm the mastermind of the whole constitution," he said, "No, if I stay here, I'm accumulating power, which is precisely what I tried to institute here against." So he left the city. He said, "Exiled. I'm not waiting for you to exile me, I'm exiling myself."

(01:22:33):

I think it's a great metaphor. We need politicians like that. I keep saying politicians that they say, "I'm really important for the movement. I'm not going to step down." No, get out, step out. Even if you're very important, democracy and people need rotation. They don't need the benevolent one-person figure.

Nate Hagens (01:22:54):

So that links your idea of dépence and the chicken and the egg of collective versus individual is we have to advocate for an open society and use less resources and expand awareness to others of that. Our society on the growth upswing is focused on monetary power, which leads to political and absolute power. There's going to have to be some sort of different arrangement if we're going to make it through this.

Giorgos Kallis (01:23:27):

Yeah, exactly. Exactly.

Nate Hagens (01:23:31):

Thank you so much for your time, Giorgos. Is there anything else you'd like to share to those listening?

Giorgos Kallis (01:23:37):

No, thank you. It was a wonderful conversation. We touched on many topics and I really enjoyed having someone with whom my ideas align and asking let's say the really important questions.

Nate Hagens (01:23:53):

To be continued, my new friend.

Giorgos Kallis (01:23:55):

Thank you, Nate.

Nate Hagens (01:23:57):

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