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[00:00:00] **Balázs Matics:** The official definition of collapse is that all the culture, all the tools, all the technology, all the language and everything is lost over a long period of time. It's a long process of losing previous capabilities, either because of cultural reasons or wars or resource depletion, or you name it.

[00:00:17] So there are many reasons why civilizations collapse, but in our case, this means that we are basically losing our technology over a long period of time. Hopefully, it's going to take centuries and not a decade or two, because at the moment it's way too fast.

[00:00:35] **Nate Hagens:** Today I am pleased to be joined by Balázs Matics, who is the author of the Substack blog, the Honest Sorcerer, for his first non-anonymous podcast interview located in Eastern Europe. Balázs is an industrial product engineer by training with two decades of experience in manufacturing, supply chain, and project management at various multinational corporations.

[00:00:57] Having been involved in a number of international projects and after completing postgraduate leadership programs in supply chain and logistics, he has developed a unique understanding of the interconnected nature of our world and our technologies. Balázs has chosen to stay anonymous when he first started writing because as you'll soon learn through this conversation, his thoughts and ideas go against the conventional thinking of our western societies.

[00:01:23] However, this podcast episode marks his first public appearance discussing the themes that he writes about as the. Sorcerer, including his on the ground insights, on the increasing fragility and complexity of global supply chains

and the growing pressure of energy and material resource constraints on Europe's industrial capabilities.

[00:01:44] These topics are also at the core of The Great Simplification, synthesis, and boish analysis demonstrates how this situation is unfolding before our eyes. Before we begin, if you're enjoying this podcast, I invite you to subscribe to our Substack newsletter where my team and I increasingly are sharing written content related to The Great Simplification.

[00:02:06] You can find the link to subscribe in the show description. With that, please welcome Balázs moti, the honest sorcerer Balázs. Welcome to the show.

[00:02:18] **Balázs Matics:** Thank you for inviting me.

[00:02:20] **Nate Hagens:** Well, I've long wanted to have the honest sorcerer on the show, and here is your coming out of the closet moment as it, as it were. you have the very erudite and systems aware substack, the honest sorcerer.

[00:02:37] And to my knowledge, this is your first, interview. as a non pseudonymous person, I'm quite excited for this 'cause I've followed your substack and your writing for quite some time. And, it's difficult for me to have people who are experts on climate who, or experts on geopolitics or experts on energy or finance, but they don't take the aerial view to see how everything fits together, but you do.

[00:03:05] so I'm really looking forward to this, this conversation. So let's start here. What are the main systemic reasons you believe, and you write that civilization is on an irreversible path towards collapse or some version of a Simplification.

[00:03:24] **Balázs Matics:** Let's start by stating, but this is not just this civilization, basically all civilizations before ours collapsed.

[00:03:30] So that was basically the normal way of operating in a surplus, sphere. So back then we were, when we were hunter gatherers. there was no question that we would, you know, sustain our culture for tens of thousands of years. Just ask the, indigenous peoples around the world. They are here for many, thousands of years.

[00:03:49] But as soon as we settled down and started green agriculture and harvesting trees for, building material and for tools, we started to live, live up the natural inheritance, what we have inherited as a species, and we have started to crowd out other species. And then we ended up in basically overshoot what catton has defined as overshoot many decades ago.

[00:04:13] so, and this is no different this time, in our situation. What makes it worse is that in our case, we have replaced many, natural resources like wood and, fish, which we have caught in the ocean with artificial, implements. So artificial energy like oil, like coal, natural gas, and, recently renewable energy, which is also artificial because it's made entirely of manmade materials.

[00:04:39] And this causes a big problem because we didn't, we do not notice in the meantime that we are living up, not only the one, one time inheritance of, natural resources, which could replenish over time. if we would let, it do so. But we also leave up the geologic inheritance of minerals, carbon rich fuels and all the rest, which makes all this civilization possible.

[00:05:02] And this is what makes us really on a trajectory towards collapse because no one can expect that disposition can go on much, far longer on a final set of resources.

[00:05:12] **Nate Hagens:** So couple clarifications there. you said coal, oil and gas are artificial energy. I think what you mean is, those are, depletable resources and from them we add artificial inputs into our economy that are non repeatable, like Haber-Bosch, it's a real thing, but it's artificial from the natural flow, standpoint.

[00:05:35] **Balázs Matics:** Yeah. Thank you for that clarification. So it's artificial in a sense that we are not naturally oil eating creatures or coal eating creatures. We don't go to here side and eat the coal. We do artificial stuff with it. So we feed them, into our machines and then these machines do the work for us.

[00:05:50] **Nate Hagens:** So here's another clarifying question and one I think about a lot.

[00:05:55] I named this podcast platform The Great Simplification, partially as a shout out to Joseph Tainter, the collapse of complex societies because as we expand, nodes and the nodes require energy and we complexify and the inverse of that, when we don't have enough at the same scale and affordability and distribution of energy as we did before, then a Simplification ensues.

[00:06:26] So how do you, one of the words that I don't use the word collapse a lot because to me when I hear it, it's too binary. It's either yes, collapse, or no, it didn't collapse. So can you unpack what you mean by collapse and is there a, is there a spectrum, or is it a, binary sort of thing?

[00:06:48] **Balázs Matics:** Show.

[00:06:49] Definition of collapse if there is such a thing, is that all the culture, all the tools, all the technology, all the language and everything is lost over a long period of time. So collapse is never a quick event which, you know, destroys the civilization in one day or one or two days. it's a long process of losing previous

capabilities, either because of cultural reasons or wars or resource depletion or you name it.

[00:07:14] So there are many reasons why civilizations collapsed, but in our case, this means that we are basically losing our technology over a long period of time. Hopefully it's going to take centuries and not, you know, just a decade or two. So this is what I believe both of us are working for, to, to, a little bit slow down this process as it is because at the moment it, it's way too fast.

[00:07:35] **Nate Hagens:** Well slow down or steer it some somehow. because in some ways slowing it down might, might also not be a good thing. So I think it's, adapting to it in some ways better than the default. Would you agree?

[00:07:53] **Balázs Matics:** Yeah, I would agree. So I often call this on my, this situation. We are in, on my blog as a predicament, which means that it has an, it, it only has an outcome, but no solutions because we are still dealing with a finance set of materials.

[00:08:06] And before anyone, you know, starts to think that we will replace those materials, I have to remind them that the. Cr the crux of the issue is not only that we have a finite set of accessible materials, but also that none of them are really replaceable. They are building, upon each other. So once you start to pull out these blocks from this Jenga tower, we have built, we call it technology, then we are going to have serious issues.

[00:08:30] So once we lose access to coal, for example, which is then used to, build, solar panels, for example, that could cause a huge issue. Or if you lose copper and things like that. Why would we lose access to coal? It's basically a, it's not a question of quantity, but quality. So when people think resource depletion, they think that every last molecule or atom of coal has been used up on the earth and there is nothing to be fad.

[00:08:55] But the situation is much different. So there is a lot of coal underneath huge mountains or underneath the seabird even. but it is not accessible to us humans or not accessible at an energy return on energy invested ratio, which is favorable to our situa, to our civilization or to our situation.

[00:09:13] And this is what we see on the produ price, index of, of core production. And just recently checked on the Fred database in the St. Louis. Feds database.

[00:09:25] **Nate Hagens:** Better check fast because it won't be here for long.

[00:09:28] **Balázs Matics:** Yes. But, and this is a very valuable database, and it was, rising in lockstep with the price of oil and the price of diesel, especially because then I dig deeper in the topic and I realized that diesel is, a key ingredient in coal mining, not in case of, not only in the case of mining, coal itself, but also delivering them to the fire, to the coal fired, power plants, and also to the refineries.

[00:09:56] I fine that all,

[00:09:56] **Nate Hagens:** couldn't that be replaced with alternative technologies over time to, to not use diesel to access, coal.

[00:10:04] **Balázs Matics:** And that's the beauty of our technology, that we can figure out solutions to each and every problem be faced. The question is not can it be done, but can it be done at a scale irrelevant to our problem

[00:10:17] **Nate Hagens:** and a price

[00:10:18] **Balázs Matics:** relevant and a price relevant and an energy return relevant to our problem.

[00:10:21] So Intel AI can build some trucks with, you know, power by hydrogen, for example, and then they could deliver coal and that would be a crazy thing by the way to do, but Intel, this could be done, but in practice it simply doesn't scale.

[00:10:33] **Nate Hagens:** I want get back to, your initial statement about, collapse, and I forget which of your articles it was, but you've written about collapse beginning on the periphery and moving towards the core towards the center.

[00:10:49] So which regions of the world do you expect to. Undergo destabilization first and why

[00:10:58] **Balázs Matics:** This might surprise some of your listeners, but I think that Europe is on the periphery, actually on this, western civilization. So what we call western civilization,

[00:11:06] **Nate Hagens:** I don't think it will surprise viewers, but

[00:11:09] **Balázs Matics:** please,

[00:11:09] explain.

[00:11:10] This is, really sad and frightening for me to see that how this whole project is falling apart. And although from the, you know, from the outside it might look like as a unified place and, a, nice place to live, but it's rapidly descending into some kind of a really strange, democratic system, so to say.

[00:11:28] So it's not even democratic anymore, which is causing a lot of issues. But also since we don't have the, energy and natural resources required to maintain this level of, consumption and this lifestyle, we'll be always dependent on someone else to deliver these materials for us.

[00:11:44] **Nate Hagens:** So let me ask you this, 'cause you live there and I only read about, where you live in the news, are people.

[00:11:54] Really naive, biophysically naive about our situation. Or is it, a situation of the mother of all cognitive dissonances that for them to acknowledge what you just stated would be too big of a, a blow to their identity and their investments and where they live and their plans for their families. So they.

[00:12:15] Kind of choose the more optimistic stories, or I mean, like how are people reacting to what's been going on in slow motion since the Ukraine war started?

[00:12:26] **Balázs Matics:** It's different country by country. So for example, in, in France, as I hear, or in my, location where I live in Hungary, there are more people aware of this situation that we are seriously dependent on, natural gas, for example, for, not only for heating our homes, but also for, generating electricity.

[00:12:44] And by switching to li liquified natural gas, LNG, the price has simply just increased double or even triple in some cases. And this makes our industries totally uncompetitive. And this is getting to be a more, common knowledge, especially in the industry. So about energy in, intensive industries.

[00:13:03] Talk to each other. And then I'm working in the industry so I, I know what's, going on in this situation. They realize that this is a huge problem, but it's more like a taboo. So they are not talking about it because this is a politically sensitive topic and this cannot be addressed, in public.

[00:13:18] So they rather hush about it and then say, oh, demand has disappeared, and oh, we have some other type of problems. But it's all across the industry. So it's not to a specific company, but basically everybody is, rather, hiding behind the fact that demand is, has started to disappear

[00:13:34] **Nate Hagens:** and demand has disappeared because affordability has

[00:13:37] **Balázs Matics:** Exactly.

[00:13:38] And this is what, what never gets mentioned.

[00:13:40] **Nate Hagens:** Yeah. So how does, I mean, Europe, Germany, have been at the forefront of the climate, story. and yet, energy security is now looming much larger politically than. Dealing with, longer term, ecological overshoot impacts. So how is that conversation, unfolding in Europe?

[00:14:08] I, imagine not quite well, but I don't know,

[00:14:11] **Balázs Matics:** not quite well. The Ukraine crisis has simply sucked out all of the air from the room. So basically nothing else is mentioned in the media nowadays. Just the war and how it'll continue or how it could be stopped and nothing, nobody really cares about the climate anymore, at least what I'm reading or what I'm seeing in the media at the moment.

[00:14:28] **Nate Hagens:** How are we gonna avoid a major war, whether between the us, Europe, Russia, or eventually with China, given a historical look at our species, when we. Get to the end of the way a, a stable system was, you know, violence and war are often what comes next? What are your thoughts on that? Living within Europe,

[00:14:52] **Balázs Matics:** and that's what I'm also afraid of, and actually we have found the answer once, in the 1980s, when we sign, started to sign, treaties about reducing the number of nuclear warheads.

[00:15:04] And it really worked. So it really started to reduce the number of, nuclear warheads. Also, intermediate range missiles has been reduced. So it's, possible and it's proven that it's possible to, rise treaties, which, you know,

incorporate, the, interest of both parties, be it Russia, Europe, or even North America.

[00:15:23] Us. So it is possible to figure out such a treaty. The problem is that there is no political will to do such things because we must, in Europe, at least this is the saying, we must concur or we must, you know, beat Russia on the battlefield because then it'll teach them a lesson and then they will go back to their place.

[00:15:39] And that's a very sad situation because it's not treating the enemy as a, as, a, how to say, on a, on the same level as we are. But we are treating, Russia as a inferior party, which doesn't deserves to be, talked to and even treated as a, an equal.

[00:15:54] **Nate Hagens:** What do you think about the uniting, the prior two topics?

[00:15:59] If Europe is going to need energy to some level, maybe something less than we have today, but at some level. They're next to Russia who has a lot of energy. They're across an ocean from the United States. Do you see any possible shift in, in those alliances, and how does the slow end of globalization affect these relationships between major countries and other blocks?

[00:16:26] **Balázs Matics:** Yeah, naturally it would make sense. And there was an initiative, again, maybe it was the nineties or early two thousands by the Germans, this was called the Oolitic or East Politics, which means that they were opening up, new pipelines towards Russia. And there was a natural process of, you know, growing our tentacles towards cheaper energy resources.

[00:16:47] But then this was whole, the, whole story was literally blown up. we don't know officially by whom, but, neither answer is good for us. So it's, still, a

very, touchy topic, which is not, again, discussed who blown up nor stream, but that's, a clear signal that this cannot go on any, any longer.

[00:17:07] And then this must stop this type of opening towards, so was Russia. So this was more likely a geopolitical chess play, that at a time that we must be separated from Russia because together be Russia, Europe could be a very strong, geopolitical party, but without Russia, Europe is just a, How to say sidekick to to, North America.

[00:17:29] **Nate Hagens:** How many people understand that, like in the common people in Hungary and Europe, that, you know, common people that pay attention to world events?

[00:17:38] **Balázs Matics:** Not too much, I would say. Especially not in the professional manager Nigeria costs where I belong. So, but if I'm talking to other professionals, engineers and managers, they still believe that this was a good choice and this has to be done.

[00:17:51] And then Russia is the enemy and we have to destroy the enemy

[00:17:54] **Nate Hagens:** so that. That viewpoint, I think you and I would label that as energy blind probably. Yes. If that viewpoint makes sense. if you believe that technology and innovation and human ingenuity are the coinage of society and not energy, materials and ecosystem functions.

[00:18:15] **Balázs Matics:** Unfortunately, still, you know, politics and, talk among people are still dominated by cultural narratives. So we are not talking about in, energy terms or in technological terms or whether this is technology blind or energy blind. We are just talking about party politics and politics about, you know, who should be, you know, who should be alive with ourselves or who should be the enemy.

[00:18:36] So nobody's really touching these topics from an energy perspective.

[00:18:39] **Nate Hagens:** Well, in their defense. Politicians aren't about truth, they're about power and being elected. So the things we are discussing on this program and the things you write about on the honest sorcerer, I can't even imagine a politician saying those things because then what?

[00:19:00] then we need to prepare a bend, not break scenario for our countries and our citizens to have less material throughput in coming decades. And the moment that is voiced, chaos ensues?

[00:19:16] **Balázs Matics:** Yeah. Not, really. This is a very good thought process, but not really. Actually, it was floated by Macron, I believe the French president.

[00:19:24] Mm-hmm. that vima.

[00:19:25] **Nate Hagens:** So Brite,

[00:19:26] **Balázs Matics:** yeah. So no, not so, so Brite. But then he actually stated in one time that the good days are over and we have to be more careful with energy and everything. I believe it, it's a certain and 22, and people had to accept it. But otherwise, only the far right and far left parties are allowed, or not, even allowed, but even talking about these topics.

[00:19:45] But then they are shut out because then they are too far to the left or to the right, and they must not be allowed near, power. So the ISTs, you know, just remain this in this energy blind state.

[00:19:54] **Nate Hagens:** So what happened to that? I, do remember that Macron kind of floated that. is he still talking that way, or have things changed?

[00:20:03] **Balázs Matics:** changed, for the verse, I believe, because now we are not talking about solidarity or, energy, security even. But we are talking about physical security and arming ourselves up to the teeth so that we can fend off a Russian invasion, which I don't believe is coming. But that's, the common narrative today, that Russia is going to invade the biotics or whatever, and then we have to fight, to the death or when North America steps in and it helps us.

[00:20:30] So that's the narrative today, unfortunately.

[00:20:33] **Nate Hagens:** So do you have any predictions, on regional blocks forming, or, how 10, 20 years from now? The geo geopolitical situation has. Changed how nations interact

[00:20:47] **Balázs Matics:** as zooming out from Europe. we already see the bricks, alliance rising. So it's, Brazil, Russia, India, China, and South Africa.

[00:20:55] So that's the, core of the alliance. And now they incorporate more and more states, including Indonesia, for example, with 400 million people. So basically, based on simply the numbers, on the number of people, the number of, barrels of oil delivered or energy delivered, they are clearly the major leading block of the bird.

[00:21:15] And this is simply not talked about in the rest. So we are, still in, still not, paying attention to what's happening around us. We still believe that we are the cool kids on the block. Well, because we have dollars.

[00:21:27] **Nate Hagens:** Planes.

[00:21:29] **Balázs Matics:** Yes. But that's rapidly changing. So China has started this digital UN initiative where they, start payments between each other, I mean,

with, with Southeast Asian countries, which is almost as big as a trade as, between, China and else on the board.

[00:21:45] So that's a huge thing. Russia has already been kicked out from the SWIFT system, so they have to, apply something else and they have to develop some kind of a payment method. So we are rapidly seeing the word, you know, falling apart in terms of, you know, geopolitics and also in terms of economics.

[00:22:01] We are falling apart in the two distant camps.

[00:22:03] **Nate Hagens:** So do you agree with the historical observation that empires often turn inward or become authoritarian as their energy surplus declines?

[00:22:13] **Balázs Matics:** Fully, unfortunately, I have to say fully. So we just have to see what happen, what's happening in Great Britain. For example, what used to be Great Britain is now, you know, rapidly approaching a Civil War status.

[00:22:24] And it's not me saying it's a Canadian sociologist, I believe. I can't remember the guy's name and I will look it up, but he is a really interesting guy, and I think he really looked up the historical parallels. What's hap what happens before a civil war breaks out? And what are the stages be, leading to a civil war?

[00:22:42] and according to his observations, great Britain is really approaching a pre Civil War status where, you know, some factions are, completely at odds with each other. And that's, that could lead only to, worsening situation. And the reaction of the government, not only in Buan but also increasingly in Europe as well, is to clamp down on free speech, clamp down on everything which is related to a more moderated discussion about the topic.

[00:23:09] Those people are actually, silenced or banned from talking to mainstream media or, talking to anyone even. So some of, the, great, military, advisors from for the Swiss Army has been just banned, to entering the European Union as they say. Oh, he was sanctioned just recently and he did really nothing wrong, just, you know, just talked about the situation as we do here.

[00:23:33] So it's really a crazy situation what we have right now.

[00:23:36] **Nate Hagens:** Ignorance is bliss,

[00:23:38] **Balázs Matics:** unfortunately.

[00:23:40] **Nate Hagens:** let's get, back to, energy, 'cause I think you had a recent, essay in this, can you give me your assessment, your current assessment of the global oil and diesel, situation and, how does that extrapolate towards.

[00:23:59] Economic growth, industrial activity, stability and all that.

[00:24:03] **Balázs Matics:** Yeah, that's a really interesting topic. So actually before we start, so that diesel is the lifeblood of the civilization. This is still a diesel powered civilization.

[00:24:11] **Nate Hagens:** So diesel's more important than gasoline or all the other products from oil,

[00:24:16] **Balázs Matics:** more than anything, gas on this planet.

[00:24:18] So these are is the key ingredient to to, actually build a civilization, it powers all the agricultural machinery. So without diesel, you cannot go grow food. But these are simply just too heavy.

[00:24:29] **Nate Hagens:** Why is diesel so important for agricultural machinery?

[00:24:33] **Balázs Matics:** Because of its, huge energy density. It is the most energy dense fuel, which what we actually know and we can utilize in large, quantities.

[00:24:42] Liquid hydrogen is the only more energy dense fuel, but that's not, you know, possible to produce at Yes. Liquid hydrogen, at, minus, I know 240 degrees Celsius. Oh yeah. Okay. And when it's liquid, then it's more energy dense than, these are. But that's the only thing.

[00:24:58] **Nate Hagens:** Well, uranium is too, but there's problems with that.

[00:25:02] **Balázs Matics:** But then you have to carry a huge reactor on your back. So you can probably pro, power a ship with it or a submarine, but you cannot power a tractor or combined harvester or anything like that with it.

[00:25:13] **Nate Hagens:** Just to, clarify this, 'cause it's been a while since I looked at this, a series of. Farm equipment for agriculture powered on gasoline versus the same on diesel.

[00:25:28] The diesels will perform better and produce more stuff for humans.

[00:25:33] **Balázs Matics:** Yes, because it has a much higher torque. And that's the critical factor in diesel engines that they can produce. Torque. Torque, yes. The, raw power, which they can pull heavy stuff. So. Tractors have to pull very heavy equipment Also, the trucks have to pull very heavy equipment and a low, RPM.

[00:25:54] So that's the, power of diesel actually, that is burns very slowly but very forcefully. So when it explodes in the combustion chamber, it creates a huge pressure wave, but also at a relatively low heat and at a low RPM. So it means

when you start up this huge, diesel engines, it can instantly create a huge torque and pull very, heavy equipment.

[00:26:16] Whereas in, in, in a gasoline powered engine, you need a huge, displacement and a huge engine just to move a car, for example. And you cannot place this engine inside a truck or something like that, that because you have to first skate up a lot. And also it would overheat. Like crazy because it burns at a much higher RPM and a much higher temperature, and it'll simply just kill itself under this huge load, which these type of engines have to carry.

[00:26:43] And this is why diesel is very important, because it's capable of carrying very, heavy loads in construction, mining, agriculture, you name it.

[00:26:49] **Nate Hagens:** So around the world, roughly what percent of each barrel of oil ends up. being diesel,

[00:26:56] **Balázs Matics:** I believe it was 30 or 33%, but that's close to the theoretical maximum.

[00:27:03] because you know, oil is just not a magic substance. You cannot be shavey parts of it. It has a certain composition and much of it, unfortunately, and increasingly towards this day is gasoline actually. So gasoline is a byproduct of diesel production. This is what, you know, refineries say, 'cause they make them big, buck and big money on selling, middle distillates, which is basically diesel and jet fuel and gasoline is really just a byproduct of this activity.

[00:27:29] **Nate Hagens:** So I've talked about this a few times over the years. if for some reason we replaced all passenger vehicles, internal combustion engines with electric vehicles. We would still need roughly the same amount of barrels of oil extracted from, the ground. Because we need the diesel. Yeah, exactly. And

the asphalt to make the roads and the plastics for the cars and all the other parts that come from the buffalo, the modern buffalo, which is a barrel of oil.

[00:27:59] But you're saying that diesel is the real magic. that comes from a, barrel of, crude oil

[00:28:06] **Balázs Matics:** that makes all of our auto technology work and possible even, you know, solar panels or electric cars. Yeah.

[00:28:12] **Nate Hagens:** What's the situation now with oil and diesel?

[00:28:15] **Balázs Matics:** Yeah, so in, in one of my blog posts, I already, you know, analyzed the situation and I showed there that up until.

[00:28:22] 2015, the ratio between, new barrels of oil added and the ratio of, increasing the, amount of diesel produced was basically one to one. So if you added one barrel of oil, then you produce, you know, one third of a barrel of diesel. And it was a 99% correlation between the two, two, substances.

[00:28:42] But then as, traditional conventional oil, which contained a lot of diesel components because diesel is not a single molecule. it's basically a set of components. so when that conventional easy to get, easy to, refine material started to plateau and peak in 2004, then this, correlation started to break down somewhat, but then we added some unconventional sources like deep sea oil, which was still, you know, relatively rich in these components.

[00:29:11] But as we needed more and more oil, as the economic grew worldwide, we started to add some more lighter components, more lighter stuff like natural gas liquids. In a much greater quantities. We started to add shale oil, which is basically more like gasoline than diesel, or more like gasoline than anything.

[00:29:28] Gas. It's a very light liquid. So the correlation started to break down, and these are simply flatlined. So from 2015, diesel badly grew and the diesel production. And while one could say that, okay, maybe the demand has disappeared in reality, we started to experience some kind of economic slowdown worldwide since 2015.

[00:29:49] And not in, not only in Europe, but also in China and everywhere else, but construction started to, you know, to break down because costs started to have rise rising and then. Came COVID, and, the lockdowns. And then everything crashed. But then as we started to wake up from that lockdown and started to restart the economy, then the crisis really hit because then we realized, hey, we don't have enough traditional oil to make diesel from.

[00:30:15] And then the diesel crack, basically the, crack spread, which means the price difference between a bottle of oil and a bottle of diesel because it's sold at a premium naturally. 'cause it's a premium product. So that price premium has simply skyrocketed after the COVID lockdowns. And then, came the Russia, Ukraine war, which then gave it another boost since Russia was a huge source of, traditional, oil, which then has to be replaced by, by, by all other kinds of oil, which had less diesel content and which was less optimized for European refineries or Indian refineries for that matter.

[00:30:51] So that really threw a spanner into the gears of the world economy. And then it, really then. Could not wake up or return to its prior state.

[00:31:00] **Nate Hagens:** What you're really saying is we shouldn't be treating oil as a singular thing. and that what it provides is, under the surface, diesel's the really important thing and diesel needs a certain type of oil, optimally.

[00:31:20] Does this have anything to do with the United States interest in Venezuela? Because that's much heavier oil, and light, shale oil, which is, you

know, approaching 50% of all of our oil is very light. Like you said, the, it's light fractions and it's good for gasoline, but the real. You know, refinery output that is valued by the economic system is, diesel.

[00:31:47] So what are your thoughts on, that and the different areas in the world that have light versus heavier oil and the correct fractions needed?

[00:31:56] **Balázs Matics:** Since you have mentioned the wood, ultra heavy oil from Venezuela, it's actually, cannot be lifted and delivered as, such. It's so thick and so heavy that it, it needs some kind of, not how to say, Some kind of a di dilutant, which dilutes it, and then it makes it portable and workable. So it's basically an ingredient. So if you're looking at a, refinery as a huge cooking pot where you put in ingredients and you get the right kind of soup, then this is only one ingredient. So even though, Venezuela has, I don't know how many trillion barrels of reserves, it's still some heavy ingredient which you have to dilute first.

[00:32:35] And this is, a match made in heaven with, with the US shale oil because then it's so light if you mix the two together, or at least components. I'm simplifying the situation rather, but if you mix the components of shale oil and the management, heavy oil in the right, amount, then you get a really good stuff that you can make diesel from.

[00:32:54] And this is what already been, you know, the warning signs are already there, that if you are losing venison oil, do an oil blockade, for example, which is then geniusly solved by seizing the ships, so to say, geniusly. And, this is how they ensure that this, type of material keeps flowing. But in a bigger picture, in a bigger sense, it's more, you know, like to, I like to view it in a, geopolitical sense from a globe global perspective, because then Venezuela is a major supplier of China.

[00:33:25] And then having a, stranglehold on ve oil also helps to reduce Chinese uptake of oil and then, which can slow down the economic

[00:33:33] **Nate Hagens:** growth

[00:33:33] Personally, I think that's more of what's going on, but, I hadn't thought recently about the light versus heavy oil and the importance of needing the whole.

[00:33:46] Buffalo to use that analogy again. because yeah, I mean, oil does not necessarily produce the same every barrel of the products around the world. It depends what kind of oil it is. Yeah. So, Some people listening to this, watching this would argue that policy, as opposed to geology is the main upcoming bottleneck to oil supply, and that there are no foreseeable limits on how much, oil and, in turn, diesel, we can extract.

[00:34:20] What's, your analysis of, someone saying.

[00:34:24] **Balázs Matics:** I don't have the right numbers or the exact numbers, how much oil lies beneath, I don't know, federal land, which is under protection or some protected areas, or how much, you know, oil drilling is slowed down by bureaucracy or red tape or things like that.

[00:34:38] But I'm sure that even if all those limitations will be lifted or would be lifted, then we would still, you know, see a bottleneck sometime in the near future regardless, because we are not only dealing with a quantity issue, but a quality issue here, again, just like with coal, that the energy required to, obtain the oil, to drill for that oil and to work with that oil is increasing steadily.

[00:35:01] And there is a study which shows that actually while it was, I don't know, 1% around 1970s, which had to be reinvested in oil infrastructure, now it's

around 15%. And as we go for the heavier and heavier stuff and deeper stuff, by 2050 it could reach 50%. This is theoretical numbers, so it's not, you know, actually, Possible at the moment because if it would reach 50%, energy return on investment, that would be basically crazy. So that we would have to inve, reinvest half of the oil, which we have extracted into extracting more, which would end up as a mortar economy, as, you would like to call it. But then before it, it would actually break the economy.

[00:35:40] It, would be impossible to maintain.

[00:35:41] **Nate Hagens:** No, it would break the economy long, before then. Yes. So, what about the amount though? The amount, I mean, I think what you're arguing for is that quality is, Underrepresented as an important aspect of this. What about quantity though? is quantity of global oil going to continue to increase?

[00:36:04] **Balázs Matics:** It's going to increase, and this is, it's, a really strange situation we are in right now, and this was actually forecast by those moders who model that 50% of the energy will have to be reinvested by 27 50. The model that as we reach towards this more unconventional sources, quality, quantity might increase still, but in net energy terms, we are already at, a high plateau if maybe we have even passed the peak of net energy and that's a big bigger issue than actually quantity on its on, in and of itself.

[00:36:33] **Nate Hagens:** Well, two big issues there. One is the gross. Burning, affects GDP. So more, more burning, even if it's a smaller net, is still good for GDP. And also the second thing is bad for the sinks, the oceans and, the biosphere, as we continue to burn more. Any thoughts on that?

[00:36:53] **Balázs Matics:** Yeah, so it's, then this would basically lead to a situation where we are digging holes just to fill them up later on.

[00:36:59] So this is a no gain economy where we just, you know, dig holes for the sake of it just to get more oil. Are you popular at parties Ballard? I'm only popular part is because I don't talk about these topics. Only when I'm specifically asked. I used to bring this up, but then the party was instantly killed.

[00:37:19] So then, okay. I realized maybe this is not the topic which other people would like to discuss, so I, you know, we just discuss kids what's happening in school and things like that.

[00:37:27] **Nate Hagens:** Segueing into the implications of this, how do you characterize the current state of, I think you've written, and used the term late stage capitalism, and what are the implications?

[00:37:40] Of what you just said about, energy and, declining net energy and diesel and, different, international geopolitical blocks because of energy security. What are the implications for economic stability and social equity?

[00:37:58] **Balázs Matics:** I would say the major implication is on economic growth because if energy gets more expensive, even just by a little, as we have seen in Europe, it basically destroys the economy because, and simply the high energy sectors will flee the continent or flee any other continent where energy is getting more expensive and, search for, other location people start to lose their jobs and then they can buy less than less products.

[00:38:21] Even the household energy can get more expensive. And then also that destroys, purchasing power. and on the other hand, we are also have a, another dynamic, which is. Basically, I would say independent of, energy, and energy and economics is the growing equality and the growing gap between the rich and the poor or basically the, rich.

[00:38:41] 10% or even 1%. And the 90% of the society, which is, basically slowly sliding down and down due to wage suppression, due to, a valve pump basically operated on top of them. So, services are just outrageously out-priced, not only in, in the US but also in Europe. And that basically acts as a drain on the economy.

[00:39:04] It just kills demand and kills everybody in the process by enriching the very few on the top.

[00:39:09] **Nate Hagens:** So I'm aware of how that's unfolding in real time in the United States. you start to see it at the grocery store. What about Europe? What about Hungary and, how are things happening just like right now versus a year or three years ago?

[00:39:25] what's your on the ground, report?

[00:39:27] **Balázs Matics:** Hungary is, a lucky place, so to say in this regard because there are no super rich people here. There are of course rich people here with Lamborghinis and, those kind of stuff, but the average people is, more equal than in other societies. We have inherited this from the previous system, especially in Eastern Europe.

[00:39:46] It's, not a big deal at the moment. it's a bigger deal in, a poorer societies, for example, in, in Southeast Europe. It's, starting to going to be a big deal. And I'm not sure about Western Europe. I'm not visiting that much, of today or these times. So we would have to ask those guys that over there, what they feel on the ground.

[00:40:06] But for now, it's not that obvious at the moment in Eastern Europe.

[00:40:10] **Nate Hagens:** So you are, an engineer, but a wide boundary, one. And so can you, describe how the instability of money and prices and some of the

things that you've been discussing undermine. Engineering and manufacturing and economic planning.

[00:40:29] **Balázs Matics:** Yeah, that's a good one because, when prices are stable, especially raw material prices and, energy prices are stable, let's say in the early two thousands, then companies could plan ahead and say that, okay, I know what the cost of raw materials or energy will be next year, so I can give a good price to my customer.

[00:40:47] And, you have to know that, you know, the supply chains are really, you know, mul multi-story buildings with a number of layers stacked up on each other in and in each and every step and, stack, energy and raw materials come in and then get built into more complex and more complex products.

[00:41:02] And if this whole chain can plan their costs accordingly, and demand is also stable or growing because we have a population who is capable of buying our products, then we can be sure that what we plan today can be made and sold tomorrow or next year at a good enough profit margin and everybody's happy.

[00:41:21] But as soon as prices start to fluctuate really crazily then, you know, suppliers tend to build in this fluctuation into their price and hedge themselves to make sure that they have their profit margin. But if, customers, like, like let's say car manufacturers in the middle of the pack say that, Hey, I'm not accepting this and I'm push down the price no matter what, then they risk bankrupting their suppliers, which then can cause supply issues.

[00:41:47] So it's, it basically unstabilize the whole system.

[00:41:49] **Nate Hagens:** How much do you worry about, Complexity and even small changes in product availability from China or South Korea or anywhere, can disrupt an engineering process. And I remember I was working, on, this issue

when the Fukushima earthquake happened two weeks later, Ford in Detroit, Michigan had to shut down their truck, production line because there was a tiny little pigment for the color of the paint mm-hmm.

[00:42:25] Of the trucks that was made in Fukushima Daiichi Prefecture. And that's just a tiny example. And to me, there's. Hundreds, if not tens of thousands of these examples in this globalized economy. And do you ever think about that and what can you share?

[00:42:42] **Balázs Matics:** So the next period was cease by the, I believe it was the Dun government then it, it really turned out to be a huge, emergency case for the whole automotive industry because this only chip manufacturer, delivered basically all of the basic calculation, chip for, all, components for, you know, electric, electric windows.

[00:43:05] and, those type of components, were just in a short supply. And, automotive companies almost had to stop and stop producing just because one tiny little chip was missing from their huge assembly of products. So that's a real possibility then, but that's more like a political situation than a, actual crisis and shortage that will come later and that will be much different than this one.

[00:43:28] **Nate Hagens:** Well, I'm just wondering, as an engineer, you have meetings, and are and around the world, and if people are looking at technology and growth as some inevitable human rights. But if you take a wider perspective and consider some of the things you talked about, diesel and geopolitics. Engineers make plans, and we have to solve problems.

[00:43:55] So the, role of an engineer in coming decades is going to possibly shift because we might not be able to depend on this six continent global supply chain and maybe some of the inputs to our processes and products that provide energy services to humans. Might have to come regionally or more locally.

[00:44:19] do you have any thoughts on that?

[00:44:20] **Balázs Matics:** This is where I believe the tinkerer types will, come into the picture. And actually, I don't believe that large companies, large multinational companies will be here for too long. They are just simply too slow to change or too slow to adopt to these type of changes.

[00:44:34] And many of them will go bankrupt or we'll have to fire a lot of people. And then these engineers who will be fired from these companies will have to, you know, find a way how to produce stuff for their own markets, maybe start their own companies and, you know, start recycling the, produce of the industrial world.

[00:44:50] **Nate Hagens:** Well, I'm sure there's some of those engineers watching this show right now. So do you have any advice to them that can visualize the scenario that you just described? How should they be thinking about their future skills and, contribution to society and their own families?

[00:45:09] **Balázs Matics:** Perhaps the most easy to g to grasp example is a repair shop where you can repair televisions or repair iPhones or whatever type of, alternate devices.

[00:45:21] by using simple components or components reclaimed from other devices. That's a huge market, and that's going to be a growing market because people will not have the money to, buy a new TV set, for example. So that's going to be a start. And then later on, maybe decades from now when you know, things really start to break down, then, you know, repairing or even rebuilding old agricultural machinery like old diesel tractors without the electronics and trying to figure out a way how to avoid using electronics, because that's going to be the first casualty of this huge supply chain breakdown.

[00:45:52] Then that's going to be a huge engine engineering challenge.

[00:45:55] **Nate Hagens:** It's amazing to me how, like if you're, where I live, in the Midwest of the United States, I don't think there are any tractors that you can buy that, that don't have all the complicated algorithms and tech, and it's, we don't have just simple diesel tractors anymore.

[00:46:13] same with bikes you can't buy and I mean, you can maybe buy just a very simple bicycle, but most of them have the, wireless derailers and, all those things. it's like a Chinese finger trap, that we keep going in, but can't extract ourselves, too easily. So, I don't know. I think about that all the time.

[00:46:38] So, in, in what ways might. Degrowth or post growth, sort of existence manifest in capitalist economies in the west and more broadly, can capitalism itself adapt to shrinking resource availability slash higher? Costs, for energy and resources,

[00:47:02] **Balázs Matics:** I believe it's, it already does and it already did.

[00:47:06] Did its best to adopt this type of situation by de industrializing itself, and then sending all the energy intensive industries over to China or over to places where energy is cheaper. So that was an already a degrowth attempt, a huge attempt at trying to remove the energy burden from, these economies.

[00:47:23] **Nate Hagens:** Well, we, didn't really degrowth, we, DeGrew our industry and then we made movies and massage therapists and lattes and such.

[00:47:31] **Balázs Matics:** Yes. But it, it was still, you know, in the area of dollar dominance, but one that era ends then this is going to be, not know a smooth deros, but I don't know, maybe a collapse of the currency system.

[00:47:44] I don't know. So it's really all better off at this point because from this point on the only, you know, source of, income or basically the, most, the biggest source of income for this economies is basically rent, economic rent, you know, selling, assets at a higher price than they have.

[00:48:00] They have been bought or renting out these assets or, but when these possibilities shrinks and, ends, then it's going to be game over. And that's a really frightening situation.

[00:48:12] **Nate Hagens:** So what role do you see for, civic.

[00:48:19] About these topics that we've been spending this last hour on in preparing societies for, a radical Simplification, in coming decade or so.

[00:48:31] **Balázs Matics:** Maybe the more honestly we talk about these topics, the better. And I think that there will be openness. So when the crisis lasts long enough and, people start to realize that this economic crisis is not going to be over in one or two years, but maybe last four decades, then they will be more open to discuss these topics and start to talk about it.

[00:48:50] You know, more honestly and more, more clearly that, okay, if the economies cannot grow any longer or start to shrink, okay, then what do we prioritize as a society? And this should really happen on a community level, even on, in the neighborhood or in municipality level. So this is where people, I believe, really have agency to form these type of, communities and groups and, talk together.

[00:49:12] What can you do in your. Immediate neighborhoods. So if there is no more investment money or there is no money to repair the roads, okay, can you know, come up, with an idea how to repair the roads, if need be? Or, can you, know, come up with an idea how to regreen the environment, how to plant trees,

or how to clean up the river bed and, try to make your location more livable place or more capable of supporting people without this amount of technology.

[00:49:38] So this is going to be a long discussion and a hard discussion with many people.

[00:49:43] **Nate Hagens:** So that's on the. Energy consumption side and, infrastructure. What about, our brains and behavior? what psychological or emotional challenges do you think people, are likely gonna face as they come to terms with these realities and, how might those be better supported?

[00:50:02] **Balázs Matics:** It depends on the speed of this, breakdown of the current system because it's breaking down as we speak. So it kind of lasts too long. If it breaks down as fast as the Soviet Union did, then their experience was that they believe that communism is going to, you know, solve every problem.

[00:50:17] And then especially in the higher and middle classes, they thought that communism is the best way of, you know, organizing things. Even though they know if it that it's not perfect and that's, good. But when that block collapsed, then people started to, you know, lose their anchor.

[00:50:33] They lose their, they mean belief system. Okay, if communism is not working, then what? And then they, you know, start to believe in capitalism and then they. Quickly realize that this is not going to save them either. So there was a huge wave of depression and hopelessness. But if it happens, beforehand, and if we start this discussion before the break comes and we start to prepare people that, hey, capitalism was probably a, limited, how to say, self, limiting approach because it, you ultimately ends up eating up the planet and itself together.

[00:51:07] Then we start, maybe start discussions, okay, what comes after capitalism or what comes after a different, mode of material exchange. And what

does come after Capitalism Balázs? It's hard to tell. It's actually, I, believe in, evolution and, I believe that, human system evolve just like any other organism on this planet.

[00:51:26] So the most fit to this other, to the given situation will be selected. So it'll depend on a, on any, given situation. So if you look at what happened in Greece, for example, in 2008, after the, their currency crisis and their, debt crisis, people started to come up with local currencies, for example, to, to solve these type of liquidity issue.

[00:51:49] But this is just one example and there are many good examples which could be picked if somebody really looks hard.

[00:51:55] **Nate Hagens:** Do you think social safety nets and community structures need to evolve in ahead of the world of, declining energy and resources as we discussed?

[00:52:04] **Balázs Matics:** They should evolve or they, there is a need to for them to evolve, but I'm not sure if they can, evolve because we are so atomized as a society that the moment that there are, you know, the, real communities are still missing and still not there supporting each other, I not know about you or your neighborhood.

[00:52:22] We've got a good neighborhood with a bit a, you know, supportive community. If, there is an excess good or stuff, we give it away even free, if someone else needs it. So there is a good community of changing, you know, type of goods or even clothes if, it's not needed in, our neighborhood. So it's a really good working model in case of social support and safety net.

[00:52:40] But I know about the rest of the world, how it works.

[00:52:44] **Nate Hagens:** I think in 2020 and COVID, we came closer to that sort of possibility. But now even though those of us that are, you know. Paying attention to the deep plumbing of our situation are quite alarmed. The, there's this consensus trance of distraction and blaming politics for our problem instead of, energy materials, ecology and, all that.

[00:53:12] So I don't think those conversations are happening nearly as widely as you would think, because the, underlying story still is growth is, a natural right. And we'll go through, I. A little bit of bumpy patch and it's off to the races again, and the future's gonna be bigger and brighter and shinier, 20, 50 years from now.

[00:53:38] **Balázs Matics:** Maybe that's the situation in the US but I'm and deliberately watching people online who are not collapsed server and they are not aware of this energy situation and even they start to realize that growth is probably over. And they already started to think about, okay, what comes next? Of course, they come up with totally energy blind ideas, but at least some discussion on the topic.

[00:53:58] And there is this fate in growth is started to breaking down.

[00:54:01] **Nate Hagens:** Yeah, you might be right. Given everything that we've talked about so far, do you have an opinion on artificial intelligence and, large language models on how that might be a, black swan or a white swan or, any type of swan with respect to these issues?

[00:54:18] **Balázs Matics:** I'm a bit skeptical about the capabilities of AI at the moment. So based on large language models and what I have seen it, it's a good tool. So it has some limitations and had some useful uses and applications, but it's a tool so it's not a, life threatening, entity at the moment, or at least I believe.

[00:54:37] Maybe if we develop something totally different based on a totally different principle, it might become this artificial general intelligence, which kills us all, but not this version, I believe. And by the time we get there, we will have so many critical issues in terms of cheap supply, for example, or raw material supply or energy supply that we won't have the energy and raw materials to, to develop or to scale it up

[00:54:59] **Nate Hagens:** just as.

[00:55:00] Question, which I have no idea the answer to. You are a, an engineer. Do engineers use AI in their jobs? Yes. More

[00:55:06] **Balázs Matics:** and more so. So, especially in those type of jobs where people, you know, don't like to be so creative, like, you know, PowerPoint engineering and, creating documentation and things like that, then that's a favorite topic, but also for managing knowledge in an organization.

[00:55:23] It's also very useful to ask and, a company-based ai Okay. Based what other people know about this topic, for example, which I'm researching at a moment.

[00:55:32] **Nate Hagens:** Well, I mean, we're on top of all the other things we've discussed. We're, slowly becoming cyborgs as we use. Chatbots to some degree, and it, the whole medium just gets meshed in to the rest of our social discourse.

[00:55:47] And it's really strange, but I think it's inevitable at this point until there's an EMP pulse or, you know, some different future, I, don't think it's gonna be stopped.

[00:55:57] **Balázs Matics:** Yeah. And this is the danger of it, because we are just, again, adding building blocks on top of the Jenga tower. So AI is just going to be one.

[00:56:03] Yeah.

[00:56:03] **Nate Hagens:** AI is a Jenga

[00:56:04] **Balázs Matics:** tower. Yeah. Or even the whole technology stack is a Jenga tower. We are pulling out a block, which was, or innate ability to create content or create something genuine, and then we put it on top and call it ai. And then Tover gets this higher and higher, of course, but of course, productivity grows.

[00:56:21] But then we are losing capabilities at the bottom, and we are increasing instability at the top, which means that at the, at, some point, this will topple over. And this is my biggest concern, that this will not topple over in a, very gentle way, but in a rather radical way when you know something really hits.

[00:56:36] **Nate Hagens:** So if you are a policymaker, or a philanthropist, who's watching this show and who kind of doesn't know the details that you just, provided, but kind of gets a gut sense that what you're saying is correct, and these people have selfless outcomes, they really want to do something to help, humanity.

[00:57:02] At large, or humanity in their country or their community avert the worst, and they want to do something about the broader climate, energy, economic, crisis. what would you recommend?

[00:57:16] **Balázs Matics:** I would recommend and to support localization, to support, you know, local, farmers, for example, to switch for a more, sustainable, more biological farming than the current version.

[00:57:29] So even, you know, create co-ops or. Or things like that, or even support local engineers and local, entrepreneurs who are trying to build something locally and, you know, even spread the knowledge and, investing type, these type of technologies which are more sustainable and builds on existing low raw materials or, existing stuff, which could be done recycled or upcycled into different type of product.

[00:57:53] **Nate Hagens:** And would they do that just on their own initiative because they understand the importance of doing that? Or do we need to have a broader educational slash cultural narrative about this for that to have a critical mass to actually happen?

[00:58:09] **Balázs Matics:** I believe we would need some kind of education. So I believe that's the point.

[00:58:14] But seeing the situation in education where we're still stuffing our kids, had a bit, theoretical knowledge about long dead people, then I don't think that's going to change anytime soon. And it's going to be just an indoctrination for the youth, you know, to, to believe the dogmas and, mantras.

[00:58:32] So we will need some kind of a totally alternative educational system. That's the present one.

[00:58:37] **Nate Hagens:** Do you have kids?

[00:58:38] **Balázs Matics:** Yes. Two.

[00:58:39] **Nate Hagens:** How old are they?

[00:58:40] **Balázs Matics:** 10 and 14.

[00:58:41] **Nate Hagens:** And do you talk to these, about these issues with them?

[00:58:45] **Balázs Matics:** Yes. Especially the younger one is really interested in this topic and then really interested, okay, what will the future bring?

[00:58:51] and, what will happen if population starts to string and not in a frightened way. So he,

[00:58:57] **Nate Hagens:** in a

[00:58:57] **Balázs Matics:** curious way, in a curious way, he sees as an as, an opportunity. Okay. Maybe this whole resource situation could be mitigated by a, smaller population or by using, you know, less technology and he's really open to this type of discussions.

[00:59:09] **Nate Hagens:** I mean, that gives me hope. I mean, 10-year-old, this is. It's common sense. If you just look at the building blocks of the Jenga Tower and explain it that way 10 year olds can kind of understand this. The problem is it's always, often, presented in a, really scary sort of way too. I mean, it is scary.

[00:59:31] as adults, I'm hella scared about it, but maybe when your son is my age, th this is gonna be looking in the rear view mirror and we have a more stable, situation. Of course then there's climate. Which, you know, I, don't have a crystal ball there, but I think there's a certain amount of heating built in.

[00:59:52] **Balázs Matics:** It's already in the pipeline and that's an issue. Yeah. So no matter what we do, some kind of heating is already logged in and then that might, you know, de over some tipping points, which can cause a lot of mayhem. But then basically this is the best advice we can give to our kids to be flexible and, be, you know, creative and don't, you know, stuck with one kind of a future

vision that I'm going to be a manager at the company because that's not going to work.

[01:00:15] **Nate Hagens:** So what other advice do you have, other than the invest locally to policymakers and philanthropists?

[01:00:22] **Balázs Matics:** I believe we should, you know, start, you know, measuring up our actual resources, what we have locally. So not only investing, but okay, measuring up how much we have, how much we can save for the future.

[01:00:33] Like a good, like a good manager who is really taking care of it, of its people. So, let's see, okay. What we have even in human resources or material resources, energy and everything, and, you know, prepare some plans. Okay, what happens if this is halved in, I don't know, 10 years? Or what happens if you have halve this amount of gas or whatever?

[01:00:54] And how do we survive? What do we, do differently?

[01:00:57] **Nate Hagens:** Bioregional scenario

[01:00:58] **Balázs Matics:** plans. Yes. Yes, exactly.

[01:01:00] **Nate Hagens:** or a accounting F Find out what the balance sheet is and then, and do scenario planning after that.

[01:01:06] **Balázs Matics:** Exactly. And then start making steps. So if, it requires, you know, reinvigorating public transport and then be it.

[01:01:14] So. Fact find a base together.

[01:01:16] **Nate Hagens:** Thank you for, all of your hard work on, your blog, and coming out of the closet, as it were today. I do agree with you that we need more

people not blaming or being afraid, but just getting some grounded agency and understanding the possibilities of what you're describing.

[01:01:41] So I know that you, at least in the past, have watched the podcast and, know that I, ask similar questions to, to all my guests. But as someone who follows the show, do you have personal advice to the listeners, of The Great Simplification at this time of. Learning and understanding all the things that we've been discussing.

[01:02:04] **Balázs Matics:** I believe they're already at a good place. So they already started to open their minds to different possibilities or different futures than what is, you know, commonly thought will, will come. So that's a very good start. So I believe it's going to be an individual choice for everyone. So it's, there is no universal advice, which could be given because every life is different, every situation is different.

[01:02:25] Every country location is different. So they have to be open-minded. So that's basically that the only advice I could give to be open-minded, be creative, and then try to come up with solutions which fits to the local problems and local issues.

[01:02:38] **Nate Hagens:** So you mentioned your younger son, but more broadly, do you have recommendations for young humans in their teens or twenties who are suddenly becoming aware of the Jenga Tower?

[01:02:50] **Balázs Matics:** First of all, and this might be surprising, but try to build real life connections. So that's the number one. And, biggest advice just, you know, come off the screen and then go out together with friends and then do stupid things even, you know, just go out to the riverside and then do some, you know, crazy stuff.

[01:03:07] Build a bunker together or things like that, which really brings people together and teaches them that they can rely on each other and they can have fun with each other. And this bring, build some. Strong bonds, which can be last lasting for many years or even a lifetime. And this is going to be the, greatest asset they will have.

[01:03:25] And other than that, you know, learn something useful. So learn some, useful skills like I know, repairing a radio or build your own radio and try to communicate with that with each other. Or build a community around, I don't know, picking up trash from the riverbed or trying to clean up your, environment.

[01:03:43] So there are so many things which could be done, which will not change the overall trajectory because it's, defined by geology and physics, but it can make life so much better for those involved that it's, you know, it's a huge difference. What do you care most about in the world? Baj? I would say truth.

[01:04:01] So that's and honesty as the name of the blog implies. So telling the truth as I see it, even though truth is something unknowable, I believe so. Truth is so big and so complex that it cannot be grasped by any single human. It is, it's a so complex topic. Even just one subtopic is so complex that it cannot digressed by a single human, but as much as it's possible.

[01:04:25] **Nate Hagens:** I totally agree with you. I think what you're describing is, the asso tote towards truth is what, is the gradient that, that people like you and I are on. Like, I started this podcast four years ago and I thought I knew a lot about energy and credit and the economic system and the environment.

[01:04:44] I've learned so much, and I continue to learn from people like you and others. And I know what's unlikely to happen and I know what things are not true, but what is actually true and what is actually going to happen is still, unknown and an emergent thing. and I'm kind of like your 10-year-old son.

[01:05:06] I'm, I remain very curious about all these things and I wanna learn. so yeah. are you gonna continue your blogging at the Honest Sorcerer? do you enjoy that and what's your plans for that?

[01:05:24] **Balázs Matics:** Yeah, very much so. So that's my really, my mission, so to say, to, continue spreading the words, or spreading the truth as I learned or as I know it.

[01:05:34] So this is, again, a personal experience in one hand, and on the other hand, it's a shared experience with others. Building a community based on. Honesty and based on knowledge, what we know and share it.

[01:05:46] **Nate Hagens:** So this is gonna, I hope this is gonna be like too much inside baseball for the viewers. but like on the weekend after you're done with your work and your family's taking care of, do you have this like urge to excrete some.

[01:06:02] Document on some topic. Like it's, a compulsion almost that you have to write about something that you learned. 'cause that's how I feel with my Franks. I don't say like, oh crap, I need to do a, frankly, this week it's like something that I feel that I have to get out. what are your thoughts on that?

[01:06:22] **Balázs Matics:** quite often and, quite often at the worst possible time. Yeah. An idea comes and then I quickly have to jot it down because I will forget it 10 minutes later. And then when I have the time, then I can return to it and then, work on it. And then this is really a calling, so it's not a a, job as you would say.

[01:06:41] **Nate Hagens:** I hate to admit this on camera, but I have a little, recording, handheld recording device, and I've tried in the past that in a hypnagogic state, the moment between sleep and fully awake, I get tons of

insights there. It's like the disciplines that we discuss, the, things between the disciplines, like wake up and talk to each other when I'm asleep.

[01:07:07] So in the middle of the night, I'll record myself a little 32nd because I know. I'll never remember it in the morning. so I have a ton of little voice recordings to myself. I digress. So if, if you could may wave a magic wand Balázs and there was no personal recourse to your decision, what is one thing you would do to improve, the human and planetary futures?

[01:07:33] **Balázs Matics:** I believe that's the tricky ask questions of all, because we both know that this is a complex system and, you know, intentions rarely turn out as they were intended to be. And the, side effects are sometimes more serious than the, original problem was. So, but I would say, and if there is one thing, then I would simply add some more, compassion to other people.

[01:07:55] So just even in the, in those dark triad types, just to feel a little bit more compassion for each other and try to be good with each other. So that's my only wish.

[01:08:04] **Nate Hagens:** It's an odd question that I maybe won't ask in the future. but it gets at the heart of like, what, like what are some things that, we can uncover that are really at the core?

[01:08:16] And I agree with you that, more compassion, is. Is one of them, what are you most concerned and what are you most hopeful about in the next five to 10 years?

[01:08:26] **Balázs Matics:** I'm most concerned about war, so that's really building up in our region. And although I fully admit, nobody really wants this to happen.

[01:08:34] So nobody really, except for the crazy war, but for most of the people and most of the politicians, they don't want actually to go to war. But I'm afraid that this is going to be like those, you know, world war i moments when nobody really wanted war, but everybody had the plans and everybody made the preparations and then a spark came and then everything blew up and this is what I'm most afraid of.

[01:08:54] That's spark will come, and then

[01:08:56] **Nate Hagens:** me too,

[01:08:56] **Balázs Matics:** and that's going to kick off some really crazy, stuff. And what I'm most hopeful about is that we will find a common, word and, we'll start discussing with each other and hopefully we can overcome this type of, you know, tribalism and then hatred.

[01:09:10] And then we'll start, you know, community building and start that community building. but, so, and we will start building a common sense among each other. And then find a way together in between nations and not only between people, but also between nations as well.

[01:09:26] **Nate Hagens:** It starts with people. you're in Hungary.

[01:09:29] I'm in Minnesota, USA and we're having this conversation, and I think most people in the world are, the same. and I, think you probably watched my, frankly, I think humans are better, than humanity is in aggregate and humanity, runs into this metabolic, maximum power pursuing structure. And, we are alive at a moment when we know that, or at least have the ability to know that and does that make a difference?

[01:10:02] And I still believe that it potentially does, which is why I. Have conversations with smart, pro-social, future oriented people like yourself by, yeah.

[01:10:13] **Balázs Matics:** Thank you.

[01:10:13] **Nate Hagens:** So if you were to come back on the program in a year, w is there any topic that we didn't cover today that you have specific expertise in or are really nerdy and passionate about that is relevant to human futures, that you would be interested in unpacking?

[01:10:33] **Balázs Matics:** I would be interested in unpacking more the resource type of, issues and problems and all the technical problems related to that. We haven't talked about, peak copper for example, or peak steel, which is basically upon us and it just went unnoticed. And this is going to have huge implications for our future, which is already here.

[01:10:51] **Nate Hagens:** Well, I, have you on camera now. So what's the deal with peak steel? I didn't, I haven't read that article. of yours, if there is one. Give us a few minute overview of that.

[01:11:02] **Balázs Matics:** Yeah, so actually steel production peaked around, the early, 2000 and twenties. And then it started to flatline and then decline.

[01:11:09] And it's, you know, steel is more like an indicator of the whole economic situation. So when there is no, no more steel used and no more cars are built, but also no more ships, no more, pipelines and, and things like that and infrastructure, like bridges and roads and tunnels. So it indicates that we are, you know, have reached an apex of our, so civilization as a builder civilization.

[01:11:31] And we started to live up the past by recycling steel and also by, you know, not building so much, we are letting things rot and letting things, you know,

break down over time. And this is an interesting topic, which is not discussed often.

[01:11:45] **Nate Hagens:** And does that rhyme with, you mentioned peak copper.

[01:11:48] **Balázs Matics:** It is rhyming, but in a different way because p copper will, will look like more like a geological limitation.

[01:11:54] And it's a combination of geological limitation and economic possibilities. But, for now it looks like a geologically constrained situation where we have some issues with producing enough copper and then we will have a major gap between what is needed to build out this green, the utopia, and what is actually can be, recovered from the earth.

[01:12:15] And that's going to be a huge mismatch in, the 2000 and thirties. And the mines or mining companies have no idea how to bridge that gap because, you know, starting and building a mine, it's already too late. It's, it won't be finished in 10 years. So it's basically already baked in that we will have a huge issue.

[01:12:31] **Nate Hagens:** Okay. Well maybe a round table, I'll have you back sooner than a year to discuss, that, because I do think that's an very important issue. Any closing comments for people watching and listening to who understand and agree with your thesis that you've laid out here today, or maybe, who read your blog?

[01:12:50] **Balázs Matics:** Try to preserve your sanity and try to preserve your, mental health. that's a very important thing in these times. And try to view things, even though if they are upsetting sometimes as a little bit, as an outsider. So don't, you know, live too much in, in your fantasies. Like, you know, what will

happen if the supply chain collapses or what will happen if you don't have this or that, but try to be, you know, a little bit more grounded.

[01:13:14] Take a walk in the forest or take a walk in the, in your neighborhood and see that, okay, collapse is still not here or not in, at a scale that which is, you know, really frightening or really scary. So try to grind yourself in reality and then start, think about, okay, this is going to be a long process.

[01:13:29] It's not going to happen overnight. Okay? Then how do I prepare myself? How do I prepare my family? What pre precautions I need to take? Or what do I do to prevent the worst things to happening from me or for my family?

[01:13:40] **Nate Hagens:** Thank you. thank you for that. I actually agree with that advice. So I think you're seven hours ahead of me.

[01:13:45] I have not yet had breakfast here in, in Minnesota, but I'm just wondering, living in Hungary, it's approaching dinner time. What, might you have for dinner tonight? Balázs

[01:13:56] **Balázs Matics:** something simple. So. Pin butter and bread. that's my favorite combination. And I'm not over complic.

[01:14:02] **Nate Hagens:** Well, I wanted you to share something in Hungary that is like a common meal.

[01:14:08] I've never been there. I know nothing about the culture.

[01:14:10] **Balázs Matics:** usually Hungary and meals are pretty heavy and pretty dense and a lot of fat and a lot of, you know, meat and that's not, you know, conducive for a good night's sleep. So I, or usually for dinner, I just eat some cheese or some nuts and then things like that.

[01:14:25] So, not nothing really heavy.

[01:14:27] **Nate Hagens:** Good for you. You have, the, psychological ability to defer the second marshmallow. so how would I say either thank you or goodbye. See you again in the Hungarian.

[01:14:40] **Balázs Matics:** So thank you. Is Ana.

[01:14:43] Guam,

[01:14:43] Yes, exactly. And then see you Is C

[01:14:46] **Nate Hagens:** Okay. Gu. Si.

[01:14:48] **Balázs Matics:** Okay.

[01:14:49] **Nate Hagens:** Thank you so much, BAAs to be continued, my friend.

[01:14:52] **Balázs Matics:** Thank you very much. Goodbye.

[01:14:54] **Nate Hagens:** If you'd like to learn more about this episode, please visit The Great Simplification dot com for references and show notes. From there, you can also join our Hilo community and subscribe to our Substack newsletter. This show is hosted by me, Nate Hagens, edited by No Troublemakers Media, and produced by Misty Stinnett and Lizzie Ani.

[01:15:16] Our production team also includes Leslie Bat Lutz, Brady Hayan, Julia Maxwell, Gabriela Slayman, and Grace Brun. Thank you for listening, and we'll see you on the next episode.