

The Great Simplification

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[00:00:00] **Peter Turchin:** We are now in a situation of high sensitivity to initial conditions. Even a single individual, if they are in the right place at the right time, or the wrong place at the wrong time, they can push the trajectory either to a really chaotic civil war or put it on the trajectory of reforms and renovation.

[00:00:18] Unfortunately, these crisis periods always take a long time to resolve, and unfortunately fast resolution usually requires a sea of blood.

[00:00:32] **Nate Hagens:** Today, I'm joined by complexity scientist, Peter Turchin, to discuss his most recent research analyzing the historical rise and fall of political tensions and turmoil in civilizations, including what that can tell us about the current state of social discourse in the United States and the world. Peter Turchin is a project leader at the Complexity Science Hub in Vienna, Austria, research associate at the University of Oxford, and emeritus professor at the University of Connecticut.

[00:01:04] He is also the founder of the field of Clio Dynamics, which is the application of mathematical and dynamical system approaches to the study of history. Peter has written several books, including his most recent *End Times Elites*, *Counter elites and the path of political disintegration*, which is the subject of today's conversation.

[00:01:30] Peter's work toward understanding the factors that nudge entire societies towards either revolutions and violence or reform and cooperation is, in my opinion, critical to avoid. The collapse of the social contract, which is one of the five horsemen in my analysis at *The Great Simplification*. If you are enjoying this podcast, I invite you to subscribe to our Substack newsletter, where you can read more of the system science underpinning the human predicament, where my team and I post special announcements related to *The Great Simplification*.

[00:02:02] You can find the link to describe in the show description. With that, please welcome Peter Turchin. Peter Turchin. Long time fan of your work. Good to see you. Glad to be here. So you have studied lots of topics that I am personally

The Great Simplification

very interested in, ecology, evolution, zoology history, sociology. What, got you interested in all those things and putting them together.

[00:02:31] **Peter Turchin:** Well, from the beginning, I was interested in working in, interdisciplinary fields. So my training was as a complexity scientist, doing computational modeling, data analysis and things like that, and applying that to population dynamics of animals. But then about, you know, when I hit 40, I decided that I wanted to do something more challenging.

[00:02:57] And so, it turns out that at that point, history, that was back in the 1990s, history was the only scientific discipline that has not been mathematized, not subjected to, a, complexity science approach. And that's why I started getting into that.

[00:03:16] **Nate Hagens:** So I just had a curiosity. Did you ever read Isaac Asimov's foundation trilogy where he developed the concept of psycho history?

[00:03:25] You're kind of you sound like you kind of match up with that.

[00:03:29] **Peter Turchin:** Yes, I read it when I was 20, but it actually did not have much influence on me. In fact, it has not had much influence, because he wrote it way back after World War II, before we had any complexity science, before we had understanding of what is mathematical chaos.

[00:03:50] And so it is in many ways, his book, books, actually the trilogy is quite naive, right? But, I'm not knocking him down. He's a great author. He's, by the way, one of my favorite science fiction authors, no question about it.

[00:04:06] **Nate Hagens:** So I'm going to get into your work. You've written over 200 peer reviewed science articles and many books, but you just mentioned a term mathematical chaos.

[00:04:18] Could you briefly define what you mean by that?

[00:04:21] **Peter Turchin:** Well, it's actually a very important idea for to understand the dynamics of our human societies, because human societies are complex systems. There are many different parts that are interacting. There are feedback loops. And

The Great Simplification

those nonlinear feedback loops result in producing unpredictable behavior, which is called mathematical chaos.

[00:04:45] It turns out that when you see some system behaving quite erratically, one possibility is that there is some kind of external force, a stochastic external force that actually drives the dynamics. But the other possibility is mathematical chaos. It's these multiple interactions within the system that generate, problems.

[00:05:04] Those, erratic looking dynamics.

[00:05:07] **Nate Hagens:** So you can predict that a system has mathematical chaos. Once you understand it has mathematical chaos. Can the results be predicted beyond the present moment?

[00:05:20] **Peter Turchin:** only in the short term future because we never have perfect models for our, for the systems that we study, even simple systems, you know, like the planetary motions.

[00:05:32] And secondly, we never have perfect data. The problem with chaos, it's called sensitive dependence on initial conditions. So this is why we cannot predict weather 10 days in advance because we cannot get the perfect model. perfect, snapshot of all the pressures and temperatures around the globe.

[00:05:51] We have, you know, weather stations, but there is also stuff in between. And so because of that, the weather is predictable until the trajectories start to diverge from the predicted trajectory because of our uncertain knowledge of initial conditions. Hopefully this will not go too much overhead for your listeners.

[00:06:12] But that's the reason why, for example, in Isaac Asimov's Psychohistory, it was not, it's not credible to predict the behaviors of human societies 200 years ahead or even one year ahead.

[00:06:26] **Nate Hagens:** Because as soon as the initial conditions change, it changes all the variables and it gets incredibly complex really fast, right?

[00:06:34] That's right. So this is why Dennis Meadows on a podcast here talked about the limits to growth model, and it wasn't a prediction of the 21st century. It

The Great Simplification

was just a prediction of which scenarios would start to change at what point. But after the change inflection beyond that, they weren't predictions.

[00:06:54] It was just potential scenarios.

[00:06:56] **Peter Turchin:** Yeah. Yeah. Well, that's exactly, as you may know, back in 2010, I published a prediction that the United States is, gradually sliding into a crisis. We should hit somewhere in the 2020s. Now that, one thing about, complex systems is that they can be in different regimes.

[00:07:18] So the road to crisis is actually fairly generalized, and that's, you know, many hundreds of previous societies have followed on this very similar road on which United States was back in 2010. All right. But once you were just right, once you get to the cusp to the crisis, and the whole suite of avenues opens up for you.

[00:07:42] And that's where You know, small push by, you know, by good leaders, for example, can either lead to good outcomes or no civil war, no bloodshed, or it could, throw the society into such chaos that, you know, everybody will, be very upset.

[00:08:00] **Nate Hagens:** So I want to, start with your, recent book called the end times elites, counter elites, and the path of political disintegration, where you outline the cyclical nature of the rise and collapse of states, as well as the primary contributing factor to those cycles, could you briefly outline what each of those, contributing factors are?

[00:08:25] **Peter Turchin:** Sure. So, here at, in Vienna, I lead a group at, Complexity Science Hub is called Social Complexity and Collapse. So we've actually amassed data on about 200 past societies that slide into crisis and then emerge from them. And so what we find is that, complex human societies can actually function reasonably well, keep internal peace and order maybe for a century, sometimes less, sometimes more, but then inevitably they get into situations of social turbulence, political disintegration.

[00:09:00] End times. So the question is why? And our analysis showed that the most frequent factor that actually develops before the crisis is what we call elite

The Great Simplification

overproduction. All right. So it's sort of like a game of musical chairs. All right. Except that you don't take chairs out. You just keep adding players.

[00:09:22] So you start with 11 players, 10 chairs. You know, one person is an angry loser and it's 15, players. You get bigger. crowd of angry losers. They start breaking rules. You can think of back to 2016, for example, and what happened since then. And then you'll see that this is actually a good model for elite overproduction.

[00:09:44] So that is, when the elites start, becoming counter elites, those losers, who did not, gain the power positions that they aimed for, right?

[00:09:57] **Nate Hagens:** Former, elites that were in the losing party, as an example.

[00:10:02] **Peter Turchin:** Yeah. Or the elites who were frustrated in getting into the power positions that they reached.

[00:10:08] Not every frustrated elite aspirant is going to turn into counter elite. It takes a certain kind to do that. But the more losers you have, the more angry, frustrated elite aspirants you have. The higher is going to be the proportion, and then they start actually coalescing into a coalition to overthrow the ruling regime.

[00:10:30] **Nate Hagens:** And what were the other factors? There was elite overproduction, and then there was some other factors, right, in your book?

[00:10:38] **Peter Turchin:** Yeah, in fact, let's, step back and ask where does elite overproduction come from? Why does it, usually develop after long periods of internal peace and order? So what happens is that, the elites are simply power holders.

[00:10:55] All right. and, the power comes in the, in four different ways, as we know. First of all, it's coercion. Secondly, it's economic power, it's administrative power, and it's persuasion, right? Ideological power. All right. So when people are in power for a long time, the generations change and they get used to the system functioning well.

The Great Simplification

[00:11:16] And there is a temptation to, to reconfigure the system to be, to function even better for themselves. Yeah. Yeah. Yeah. Right? So they become, we call it, the selfish phase of the elites. Right? And so what they do, in different societies, they use different methods. But, let's say in the Medieval times, the lords would actually start oppressing peasants to extract more wealth from them.

[00:11:43] They turned on the wealth pump, which takes, the wealth money from the poor, gives it to the rich in the United States. This happened in 1970s. This is when the governing elites of, our country have abandoned the New deal. institutions, most importantly, institutions that ensured that fruits of economic growth would be divided fairly between the workers and owners and managers of businesses.

[00:12:12] I'm sure you and your readers have seen those famous graph, which shows the increase, how the productivity of American workers. Keeps increasing, and until late 1970s, compensation goes right in line with that, and then boom, compensation actually stops and even declines, whereas productivity keeps going up.

[00:12:31] So what happened to that gap? That's the wealth pump operating, all right? All of that money went to create newly wealthy people in the United States.

[00:12:42] **Nate Hagens:** I'm really not happy that you only have an hour because I have three hours of questions for you, but I will, pick my best questions. So put on your zoology hat for a moment.

[00:12:55] Is the elite overproduction, thesis that you have. Kind of a predictable, just observational outcome of a biological species with access to huge energy surplus, but the biological species is a social species that creates hierarchy and then what ends up happening is just a power law when there's this surplus running through the system.

[00:13:23] **Peter Turchin:** Well, although my PhD is in zoology, I am not a big fan of making direct comparisons, right? So, what's important at a much more abstract level, the mathematical models and the frameworks we developed for studying population dynamics, they can work quite well for societal dynamics. But the actual mechanisms are different.

The Great Simplification

[00:13:45] It's not like predator prey, relations. It's, it has to do because humans are both predators and prey. All right. So we have to look at the, differentials in power. So that gives us a small proportion of power holders. These are the elites. All right. And then everybody else, the Commodores. What percentage of a population are elites roughly?

[00:14:10] Roughly, it's one, two, three percent, but the whole point of the literal production is that, the social pyramid, pyramid becomes more top heavy. And so that's why, let's go back to this, to the wealth pump that has been operating in the United States since 1970s. Between 1980 and 2020, The number of uber wealthy people who own 10 million or more in wealth, the households, right, increased by a factor 10, tenfold, right?

[00:14:43] The population has grown by a factor 40%, but we have 10 times as many, deca millionaires as we had before, all right? So saying that what is the, clearly people who have 10 billion or more, they're part of their economic elites. Right. Because there's, they used to be 0.05%. Now they're close to 1%, but not quite.

[00:15:06] **Nate Hagens:** So you're Russian, or a Russian ancestry. You were born in Russia. You hear in the news a lot about Russian oligarchs. does the United States have a oligarch, problem, by a different label, perhaps?

[00:15:23] **Peter Turchin:** Well, I actually grew up in the Soviet Union, a country that does not exist anymore, and I hope the United States will not do the same.

[00:15:31] But yes, so what happened in Russia, and actually I have a chapter in my book and times talking about it, is that, first of all, during the run up to the Russian There was a huge overproduction of, of gentry, essentially, no nobility. And in fact, revolution was done not by peasants and, workers.

[00:15:56] It was done by the frustrated members, of the, that came from the, those, elite, classes. Alright, and fast forward to. to 1990, Soviet Union actually managed to solve this problem by essentially exterminating the, previous, ruling class or driving them into, the common class, right?

The Great Simplification

[00:16:21] and it lasted for about, 70 or, so years, but then they had their own problems. They overproduced, credential deletes. We have not talked much about that, but this is very important to look both at the wealth drought and the credential drought. In particular, interestingly enough, they overproduced, engineers, technical, intelligentsia, so called.

[00:16:43] And these are the ones who actually were in the squares, and they who overthrew the communist regime. All right. And that freed up, a lot of People to, generate a huge amount of wealth. The whole, even as the, economy of Russia was collapsing in the 1990s, a number of newly wealthy, billionaires actually were making huge amounts of money.

[00:17:10] And in fact, for a while, they controlled the government. During the 1990s. Right. But then there was a sort of counter-revolution against them by the, military administrative elite led by Putin, essentially. And that's why the oligarchs now are either in, in, in exile or, some of them actually died and the rest could remain.

[00:17:34] They're thoroughly sub originated to the, to the bureaucratic apparatus in, modern Russia.

[00:17:40] **Nate Hagens:** So why does the, what you refer to as elite overproduction, eventually lead to a collapse of society? Is it really the overproduction of elites or is it the elites relative to the services available to the general person and that delta gets wider and wider or, some other factors?

[00:18:03] How does elite overproduction manifest in, collapse or societal decay?

[00:18:09] **Peter Turchin:** Okay, well, yes, because we live in a complex society, the situation is a bit more complex than I portrayed it a minute ago, so let's unpack some of those, you know, complexities. First of all, the wealth pump that I was talking about, it has three negative consequences.

[00:18:26] The first one is the stagnation and even decline of the living standards. of the general population that creates popular discontent, right? And, as a result of that, a mass mobilization, there is a, there are many people who are willing, who are actually dislike the regime and are willing to help anybody who wants to overthrow it.

The Great Simplification

[00:18:50] But by themselves, they have no power. They have no organizational power. They have no wealth, have no persuasion and so on and so forth. That's why of a production of a research critical. Once you see countless so appear in large numbers and they start coalescing. They are the ones who actually organize and channel popular discontent.

[00:19:12] All right. So the combination of, immiseration and the need for production, that's the explosive one. Also, important are, I don't want to go into too much detail, but, the state strength. It's, first of all, how much legitimacy it has, right? And also it's fiscal health. These are also important factors, although they are not ubiquitous.

[00:19:33] Sometimes they play, in the road to crisis, sometimes they don't. And finally, the geopolitical, situation also can be, an important factor. But the two main ones is elite war production together with immiseration.

[00:19:47] **Nate Hagens:** Defining elites, there are four categories, the economic or financial, military or power, the ability to persuade and administrative, as you said, which category of those four is most dominant in the United States today?

[00:20:03] And how does this compare with the rest of the world?

[00:20:06] **Peter Turchin:** So in the United States, the, elites, the power, holders come from two routes. One is the wealth route. The other one is credentialed route. And that's why, some, commentators consider, that we have the 1 percent who is the wealth power and to the 10 percent who are the top, you know, people who have, especially professional, degrees such as law, doctor, and, or professor.

[00:20:36] and so on and so forth.

[00:20:37] **Nate Hagens:** So I have a Ph. D. In ecological economics, which very few people care about. Am I in the lead?

[00:20:44] **Peter Turchin:** So again, that there is no such a hard ball. Okay. They are the ball. Okay. it's just as in the wealth categories, you have billionaires, people who have 100 million, 10 million in that people like myself, right?

The Great Simplification

[00:21:01] and, and that The same thing is in other, hierarchies. So, you know, a columnist of New York Times is much more influential than a columnist at Idaho Sun and News, right? So all sort of at different levels, in this, in this pyramid. So I've been lucky enough, even though I became penniless to this country, 47 years ago or so, right?

[00:21:28] I've been, I've been lucky to get into the upper 10 percent is actually a bit. Because of credentials and also accumulated, you know, some, pension money and so on and so forth. So this is actually, gives me enough power over my life. All right. But not, really much power over other people.

[00:21:49] Whereas, somebody who is, the president of United States, right, they obviously have much, much more power over people. So this is segregation thing. That's important to keep in mind.

[00:22:01] **Nate Hagens:** So it sounds like if living standards are getting worse for the average person, which you term commiseration and the elites, what we're, experiencing now is a yo-yo pendulum swing between the elites and the counter elites who then become the elites again, and the elites become the counter elites.

[00:22:22] And that whole process keeps yo-yoing un until it breaks. Is that the trajectory that we're on.

[00:22:29] **Peter Turchin:** Usually, it's not, it doesn't go back and forth. So if you look at other, previous end times, in the French Revolution, right, their old, elites, the nobility and the clergy, they were overthrown by a coalition of counter elites.

[00:22:47] But then, as we know, A revolution tends to devour its children. So different segments of counter elites eventually started fighting amongst themselves. And they also did quite a good job exterminating themselves. And by doing that, they essentially, solved the problem of elite overproduction. All right, by eliminating all those extra surplus elites.

[00:23:11] So in the United States, now, right now, we are at a very interesting cusp because the way, looking through the lens of our theory, what happened on November five was there, a revolution for, bloodless, fortunately, revolution in which

The Great Simplification

a coalition of country elites came to power. All right, or at least is in the process of coming to power.

[00:23:35] We don't know what's going to happen in the next two months. Now why do I? So you have, the Democratic Party has become the home of the ruling class. And that happened because, first of all, they have abandoned their roots as a working as a workers party, you know, back in the 1990s. But more recently, as, Trump was taking over the Republican Party, right?

[00:23:59] Many of the established Republicans voted. The Democrats. So Liz Cheney and her father, you know, neocons and so on and so forth. And there was the opposite movement of some Democrats like RFK Jr., Robert Kennedy Jr. or Tulsi Gabbard, who used to be Democrats, but now they are ardent Trump supporters. So we see this sorting out.

[00:24:21] It's very interesting. Republicans. in the process of becoming a party, as they say, the party of the working people, or as their critics, say the party of the, extreme right wing, populism. All right. But we see this sorting, in the, in terms of theory between counter elites and the ruling elites.

[00:24:41] Now, if Trump is successful, that right, then the goal is clearly judging by, the kinds of people that he wants to appoint to the top position, and also what they want to do to the bureaucracy, right? Which means decimate it, right? So the goal is to overthrow what they call the deep state or the established elites and replace them.

[00:25:03] with a new crop of counter elites. So that's how I interpret what's happening. But this revolution is still work in progress. There are many things that, the ruling party can do to derail it in a variety of ways, as they were very successfully successful in 2016. And, you know, the first, term of, Donald Trump.

[00:25:27] **Nate Hagens:** So in your study, you said hundreds of. Historical societies, every time that there was a lead overproduction and immiseration, in, society, did it result in a, collapse of that structure and those institutions? Or were there times that it got close and, was averted?

The Great Simplification

[00:25:49] **Peter Turchin:** Well, first of all, it turns out collapse is a completely overused, word.

[00:25:53] I agree. You know, you now have about 200, of this, crisis, right? And it turns out that there's no such thing as a typical collapse. Each collapse is unhappy in its own way, as, Anna Karenina, well, the heroes of Anna Karenina might have said, right? And that's what I meant, that once, you get to the crisis.

[00:26:15] That road is pretty narrow, right? But once you get to crisis, there's so many different possibilities. So you can, one kind of collapse is when there is a demographic collapse. Another kind of collapse is political fragmentation when, you know, the country ceases to exist and is replaced by a number of smaller countries and so on and so forth.

[00:26:33] There is a huge number of dimensions along this can happen. And most importantly for us, in about 10, 15 percent of cases, there is no bloodshed. No, no huge amounts of violence. Somehow, sometimes, societies led by unusually prosocial and, you know, functional elites managed to navigate their way through this crisis and bring the ship of state, you know, safely to the other side.

[00:27:03] **Nate Hagens:** And what were the characteristics of those situations where there was a pro social leader that brought the ship to the other side? Are there any, standard things that you noticed?

[00:27:15] **Peter Turchin:** Well, I can give you some examples, but this is actually why we are collecting so much, data, because we had, we want to first, at least characterize, Statistically, the different types of outcomes, and then you want to probe the causal factors.

[00:27:34] But this is very much work in progress. In fact, I, you know, I don't know, I have no, yet, I have, apart from saying that you have to shut down the wealth pump. because that's how, all societies, they actually left crisis by shutting down the wealth swap, reversing the stagnation of the, majority of population, this shuts down the editor production and so on.

[00:27:58] But, in each case, they've done it in, very different ways. All right. And so we have, I don't yet have a general lesson to.

The Great Simplification

[00:28:07] **Nate Hagens:** So wouldn't naturally the wealth pump be shut down just by market forces like Weimar Germany or the Great Depression with a financial collapse? Or can you actually use policy and legislation to shrink the wealth pump?

[00:28:25] **Peter Turchin:** Let's take, the aftermath of, the, of 1929 in the United States, the stock market collapse. In fact, it was not just stock market collapse. United States had experienced terrible, recessions, before that, like the, in the 1870s there was a long recession and so it was like every 20 years there was, a recession, which actually some of them were even worse in the Great Depression.

[00:28:55] Alright? What actually, during the country around was the institutional remaking of the country. It, basically it started during the, it took her 30 years to do that because it started at the beginning of the 20th century. During the progressive era. All right. And then it was finished during the New Deal.

[00:29:19] All right. So, that's actually what got the United States not only out of crisis, but also without a revolution or civil war, because the previous crisis was, of course, ended with the Civil War, which took hundreds of thousands of casualties and really, really, caused a lot of, you know, pain to the country.

[00:29:44] So Ahem. So, the, trick here is that, it's not just, a terrible war or terrible revolution or, stock market collapse. it has to, the way it works is indirectly, it focuses the attention of the leaders on what they need to do in order to get the country back on track.

[00:30:09] **Nate Hagens:** So. We look at the elite overproduction, which you've described in the United States today, but does any society, looking back in history, is it inevitable that there is an elite overproduction or does it only happen sometimes when things are stable for a long period of time?

[00:30:27] **Peter Turchin:** Exactly. It follows after long periods of, internal stability. And when the elites get used to the state of things, and I think that it will, they can actually monkey with the system, make it work better for them. All right. and it will not ruin anything. This is called the iron law of oligarchy. Okay.

[00:30:47] Just because they have power, right, they can actually, you know, get, try to get even more out of the system. And by doing that, they turn on the wealth

The Great Simplification

pump. And then after some time, actually it takes, you know, 20, 30, 40 years, they actually look at the ruination of, of their class as a result of the revolution of civil war or civil war.

[00:31:11] **Nate Hagens:** So this wouldn't happen in pre agricultural societies where we had 100, 300 people living on the savannah in Tanzania. this has to exist where there's storable, tradable surplus and, commodities, right? Isn't this kind of a social optimal foraging dynamic with humans in a broader society?

[00:31:35] **Peter Turchin:** Well, I would just say that, yes, in order to have a state collapse, you have to have a state.

[00:31:40] And the states appeared about 5, 000 years ago. And so we have this tripartite structure, the general population, people with power, elites, and the state structures, which is a, another agent that may have a lot of autonomy, for example. Interestingly enough, recently, I, together with my collaborators, we looked at the Neolithic societies and they have their own collapses, actually pretty terrible collapses.

[00:32:05] But it's of course not a state collapse, it's just, the, conditions of war break out and people run away and whole areas, large regions get abandoned, essentially.

[00:32:16] **Nate Hagens:** And even though they didn't have states, was there some analog to having elite overproduction and popular immiseration and in those societies,

[00:32:27] **Peter Turchin:** it's more over.

[00:32:29] It's

[00:32:30] **Nate Hagens:** overpopulation.

[00:32:31] **Peter Turchin:** Yes. So when there are too many people. they leave all in their into political independent villages, right? There is no overarching authority that would prevent conflicts from escalating. And so when the whole landscape fills

The Great Simplification

up your villages, those people start competing over some, scares or precious, resources.

[00:32:52] All right. And that leads to some violence. And then eventually they find themselves in the world. They forget how it all started. Now it's basically, it's a blood revenge against all those bad guys.

[00:33:05] **Nate Hagens:** and the other side thinks it's blood revenge against those bad guys. So let me ask you this. You said earlier that once we get to this point, it's a very thin line.

[00:33:16] You also said that it's very difficult to predict more than the very near term because the initial conditions of. Future moments will change, but I'll ask you, Peter, a different question, knowing all the things, you know, and yes, it's not psycho history, but it's mathematical chaos that you've studied, you know, your entire career.

[00:33:40] If you were not advising someone today how to avert what's coming, that's a separate question. But if you were planting the seeds for a more stable future society that would not fall into these same stability breeds complacency and overproduction of elites, what sort of, Firewalls and constraints and, laws or rules.

[00:34:09] Would you recommend to a future society to avoid this build up and eventual, different flavor of collapse for the state due to these trends that you, observe all over history and all over the world.

[00:34:26] **Peter Turchin:** That's a very good question. And in fact, that's why that's a big reason why we do our science is because we want to figure out how to prevent future collapses that this now we are in a revolutionary situation already.

[00:34:39] It's too late to prevent this revolution, right? But in the future, we can do it. And that's what our science actually can be predictive. It's predictive, not of how the trajectory Reveal involved because that de depends. So too much on the actions of individual people, especially influential leaders. But it's predictive of what we should do to avoid such, collapses.

The Great Simplification

[00:35:03] And in fact, our analysis shows that 5,000 years ago, the states were much, much more fragile. They would more easily collapse and they would stay collapsed, with more severe consequences for longer times. So we collectively, the humanity collectively is learning. We are accumulating good institutions.

[00:35:21] You know, even if you think about democracy, of course, democracy, democratic institutions is not when I see it's not going to, you know, prevent necessarily those things, but it helps to, to, to manage the crisis in much less bloody way. And also, things like. Productive economies, you know, at least, immiseration, United States.

[00:35:43] it doesn't mean that, the majority of people are starving like it would happen in 14th,

[00:35:49] century

[00:35:49] **Nate Hagens:** France. So it is relative immiseration, not absolute. We compare our, situation to the recent past.

[00:35:56] **Peter Turchin:** Yeah, no, it's actually absolute. I did not think it would get to this point, but in 2017, the average life expectancy for Americans started to decline even before COVID.

[00:36:08] And so now we are still not, again, some ground, but we are still below that 2017. So in some aspects of it actually, you know, are amazing. I've never, I never would have, predicted that to tell the truth.

[00:36:24] **Nate Hagens:** So if you, put a time capsule into the future post whatever happens, so what are you, what are, let me start here.

[00:36:33] What are you predicting now? You have your 2023 book and then you had your paper in 2010 predicting events in the 2020s in the United States. What do you think is going to happen in the next five or 10 years broadly? In the U. S.

[00:36:49] **Peter Turchin:** First of all, one thing we can say that it's not over. Many people thought that after into it after 2020 when the ruling class quashed the, the revolution, right?

The Great Simplification

[00:37:03] It was over. No, unfortunately, this crisis periods are always take long time to resolve. And unfortunately, fast resolution Usually it requires a sea of blood, right? So let's hope for a longer and a resolution that would involve reforms that would change the country, right? But exactly what happens is, as I said, we are now in a situation of high sensitivity to initial conditions.

[00:37:33] even a single individual can actually, if they are in the right place at the right time or the wrong place in the wrong time. They can push the trajectory either to a really chaotic, civil war or put it on the trajectory of reforms and renovation. All right. So because this is so hugely contingent, all right, anybody who will try to predict to you, that we're going to have this or that, they are either fooling you or they are themselves false.

[00:38:03] **Nate Hagens:** But do you have a base case? you, it's kind of too late to really change the current trajectory. I heard you say earlier.

[00:38:13] **Peter Turchin:** So, but, look at this. We are still, in this situation where there is no hot civil war. We are in a cold civil war. So, some, recommendations are actually don't, start.

[00:38:27] A hot civil war, even if you think you're right and Trump is horrible, right? don't, use violence to, to derail his, presidency. And I say that not because I am, you know, a partisan of Trump. I'm just, I just know how easily violence can, spiral up, in this, situations. That's one, thing.

[00:38:51] And also, the, pruding, elites, they should now understand it's not Trump. It's not, you know, a bad, you know, deplorables. I mean, they are the ones who let this country over the past, 40 or 50 years to this situation. All right. So if they regain power, then they should follow in the footsteps of FDR or, in England, the Chartist period.

[00:39:24] All right. So, take, this is a serious situation and you, you, don't have to sacrifice some of your, you know, interest, right? I mean, it doesn't mean that you have to, give up all your billions, but You still would have to, to get the country to the situation where the foods of economic labor are, have, are shared fairly, which means that owners, for example, of the, businesses would be getting less than they're used to over the past 40 years.

The Great Simplification

[00:39:55] So the profits, would be smaller. They still would be profits, but they would be smaller and they would be in balance.

[00:40:01] **Nate Hagens:** And are there examples in history where there was elite overproduction and the wealth pump had gotten out of control and so there was popular immiseration where the elites recognized the risk and they reversed a little bit of the gains from the wealth pump in order to stabilize society?

[00:40:20] Were there examples where that worked out?

[00:40:23] **Peter Turchin:** Yeah. And I talk about them in my book. So for example, the previous complete wave off, of this Christ, the crisis wave is known to historians as the age of revolutions, right? So it's mostly from very late 18th century. Speaking during the revolutions of 1848, and of course there were civil wars in China in 1860, United States and so on and so forth.

[00:40:48] The only two major countries that escaped it were first of all the British Empire, and because, and they managed to deal with it by adopting the right reforms. And the other one may surprise you. It was Tsarist Russia. So Tsarist Russia in 1860 was in a revolutionary situation. The peasants who were half of them who are still serfs.

[00:41:12] They were, building, the houses of their landlords. You know, there was just, the state lost all the legitimacy as a result of, trophe defeat in the Caribbean War Z. Alexander ii, made a speech. He told to the ity, we are, you either have revolution from below. or revolution from above.

[00:41:36] Actually, it was because his brother was reading the book called Democracy in America, who suggested this, thought to Alexander. so, so they did. It was, over the period of about 10 years, it's called the Great Reforms. They actually, the free the serfs, you know, they, Completely reformed the system.

[00:41:58] And they bought Russia 50 years. Unfortunately, then, during the, 1905 and 1917 revolutions, Russia was put, especially 1917, under such huge geopolitical pressure that it broke. All right. But still, they gained Russia 50 years. That's actually was not a bad, you know, achievement.

The Great Simplification

[00:42:23] **Nate Hagens:** Do you ever read fiction, Peter, or like watch Netflix shows or it I just get the feeling that you are interested in this topic and thinking about it and solving it all the time?

[00:42:34] **Peter Turchin:** well, no. I do. Yes. I, read, if I did not read fiction, in the evening. my brain would keep churning. And so, yes, no, I don't, it's for my health reasons, you know, I have certain routines that, shut down the brain and, allow me to rest and so forth. And yeah, and I, watch, some, especially, well, but of course some of the, you know, movies that I watch, like the game of thrones.

[00:43:05] I mean, I can't watch it without saying, yes, this is it. Carl, you need to have red action for us. Yeah,

[00:43:15] **Nate Hagens:** I, hear you. I hear you. So you've done all this amazing historical, meta analysis of, and come up with this thesis of elite overproduction and immiseration of, the common population, but how much of this is separate from.

[00:43:35] energy and, material resource depletion and the environment. I don't, I, and the ecology, I don't hear you talk about those things so much. Is this dynamic that you're, observing independent of energy and, ecology?

[00:43:52] **Peter Turchin:** I do talk about this in my book. Because these are, I treat them as secondary factors because we find that in about half of the crisis periods, there was a major pandemic, major epidemic, or even a pandemic.

[00:44:06] It's not ubiquitous. All right. But what we had, the COVID that we had, which really are. Yeah. put the social system on the, on the edge, right? That actually is quite a typical situation. For example, the Black Death in 1348 killed, half of the population of, peasants, but much smaller proportion of the elites because they could escape it.

[00:44:33] As a result of it, the pyramid became even more Top heavy, and that's what caused, France, for example, go into a hundred years of hostility. And the same thing with climate. Climate can either, long stretches of good climate can extend, good periods, right? Because, they, for example, help against immiseration because their crops, you know, yields grow, right, during the periods of good crisis.

The Great Simplification

[00:45:00] And vice versa, when you have a period of famine, that could be a trigger. For, for, system collapsing. So in the, in France in 1789, the trigger that actually released, the pent up pressure was the sharp drop in food prices. Okay, it call it resulted in hunger strikes, urban riots, and that was the final sort of straw that broke the camel's back.

[00:45:28] **Nate Hagens:** Does the trends in the United States that you're monitoring and you've discussed are these, common throughout the world right now? Or is the United States a special case? Oh, no,

[00:45:40] **Peter Turchin:** not at all. in fact, but, keep in mind that there is no strict, a synchronicity here. All right. So France, for example, if we judging by such proxies as the growth of inequality in wealth and income, in France, it started growing much later.

[00:46:02] Then in the United States. And then, if you look at places of China, China has only recently emerged from its own, in times which lasted for over a century. So they still have a lot, you know, of slack to go through before they get it. To their own end times.

[00:46:22] **Nate Hagens:** So the dynamic that you're describing is kind of, ambivalent about the absolute magnitude of wealth in a country.

[00:46:32] For instance, there may be some materially poorer countries in the world that have much lower GDP per capita than the United States, but that they have a better Elite versus, immiseration in the populace level relative to the United States. Is that true?

[00:46:54] **Peter Turchin:** So in fact, immiseration, even though it's now in the United States in absolute terms because of the life expectancy, but in the reality of course, humans are social creatures.

[00:47:04] And we have, we are, when we, as we grow up, in our, parents households, you sort of get imprinted on what is, what normal life should be like, right? And so if you are exceeding, you know, as was happening from the 1930s all the way into the 1980s, right? If the next generation lives better than their parents,

The Great Simplification

they are quite happy, even though back in the, you know, in the 1930s, or even go back.

[00:47:31] to, 11th century France, right? Those persons were poor, but their life was actually as good as their, as their parents. And so they were not rebelling. Right? So that's, so that is a dynamic that is very important. So it's our

[00:47:48] **Nate Hagens:** expectations as a society that play a large role on whether we're in misery or not.

[00:47:55] **Peter Turchin:** Yeah, it's the same thing for the elites. So one way that a little production is sold is, of course, when they get exterminated or, you know, forcefully driven down or but in many situations, many aspirants just give up. Right, especially if they have some decent job to go to, right, which is why you need to solve, immiseration, right?

[00:48:17] If you solve immiseration, then many of those, elite aspirants, they would basically say, okay, to hell with that, I'll just, become a carpenter or whatever. so it's again, yeah, it is, very much, expectations and ability to match. Your expectations.

[00:48:39] **Nate Hagens:** So recently I had Jeremy Grantham on this show who outlined a prediction of declining human population in the not too distant future due to plummeting fertility rates partially due to endocrine disrupting chemicals But how would a decline in overall population in the world or overall population in various countries?

[00:49:03] affect the pressures on mass immiseration and elite overproduction.

[00:49:08] **Peter Turchin:** So, here we are in good shape because, very many of this crisis, periods in the past resulted in population decline. So for immiseration, Population decline is an unvarnished good because, it reduces, so the supply of labor, all right, and it tends not to affect too much the demand for it, or less.

[00:49:37] And as a result of that, we saw, for example, after the Black Death, you know, the English peasants, started eating white bread, drinking beer. which they could not afford before because they were so immiserated and, and things like

The Great Simplification

that. Of course, before, before, before, we can get on the sustainable trajectory, societies have to deal with the literal production.

[00:50:04] So in a, short term, population decline. exacerbates a little reproduction because of the social pyramid becoming too top heavy. All right, so you have to somehow deal with that problem. But eventually that is, this is one of the mechanical ways of shutting down the wealth pump is, essentially, is making, labor supply to be insufficient for the, for the jobs you need because that inevitably will drive up the wages.

[00:50:40] And then, you have, the reversal of immiseration.

[00:50:43] **Nate Hagens:** So interjecting my own work on describing the carbon pulse as a driver of our wealth and productivity, we have effectively 500 billion human workers in the form of coal, oil and gas that are we're adding to the work of machines, adding to the five billion actual workers.

[00:51:05] And as that fossil workforce gradually retires and declines, that's also going to have an impact on immiseration. and, the dynamic you discuss.

[00:51:17] **Peter Turchin:** Yes. But, the fortunate thing is that, this carbon based energy, is in the process of being replaced with, especially solar. solar technology development has been amazing in terms of the costs, of producing electricity and storing it, the batteries, you know, so many people, well, techno optimists, and I'm sort of, on their side, they think that we will just have huge amounts of play, plentiful energy just in the five, 10 years, period.

[00:51:50] I mean, let's think about it. If you just put half of Arizona, which nobody uses. Just put, you know, solar panels there, you can supply the whole world essentially for many decades to come.

[00:52:04] **Nate Hagens:** Have you thought about how artificial intelligence might influence and impact, the, science backdrop that you've laid out here with elite overproduction and, immiseration?

[00:52:17] **Peter Turchin:** Yes. In fact, I have a blog post about this. So, so here's my thinking that previous technological advances, have replaced workers, right?

The Great Simplification

Workers have very little power because they're not organized. Now, AI has come for the elites. It is replacing elites. Remember, I was saying that there is a credential route to power.

[00:52:44] If you want to gain a political office in the United States and you don't have wealth, what do you do? You go to the law school. Now, about two years ago, we produced in the United States three times as many lawyers as there were positions for them, all right? Now, about half of those positions are being eliminated.

[00:53:04] Just two weeks ago, I was at a conference off, you know, pension fund holders. And they're saying that I have fired all my, you know, legal assistance. you know,

[00:53:17] **Nate Hagens:** we have three times the graduates than there are law jobs available. But now A. I. Has caused that to be 6 to 1.

[00:53:25] **Peter Turchin:** Exactly. And lawyers are the most dangerous, profession from the point of view of social stability.

[00:53:32] Lenin was a lawyer. Castro was a lawyer. you know, Robespierre was a lawyer. Gandhi was a lawyer. Over the hill, that, piece of revolution.

[00:53:40] **Nate Hagens:** Is it, shorthand that we have, lawyer overproduction?

[00:53:44] **Peter Turchin:** Yeah, we have overproduction of many, we have overproduction of PhDs also, but PhDs professors are, not terribly dangerous people.

[00:53:54] Lawyers are, and I say that not because I hate them or anything. All right. But it's just historically, they have been the leaders, of many revolutions and civil wars. Why do you

[00:54:05] **Nate Hagens:** think that is? Is it because lawyers know how to think in, in logical Machiavellian ways? Or what, do you think explains that?

The Great Simplification

[00:54:13] **Peter Turchin:** Yeah, partly, that, because you have to be very flexible ideologically. You cannot just start by being a socialist. You, you know, just think, about people like Stalin. Stalin kept changing his ideology depending on, you know, on what the landscape was. As a result of that, he got ahead. Whereas Trotsky, he kept pushing for the world revolution, right?

[00:54:40] And so he ended up, you know, ice pick in his brain. So that's, you know, being flexible and being able to argue any side, is actually an advantage in a successful

[00:54:51] **Nate Hagens:** revolutionary. So, standing here today, at the dawn of 2025, what do you think is the single most pressing issue to address?

[00:55:02] **Peter Turchin:** First of all, keep things, peaceful.

[00:55:04] Don't allow, any violence to escalate. And secondly, there are, the Trump administration has really, from what they are saying, they don't really have an idea. First of all, they don't understand, you know, the idea that you have to shut down the wealth pump. Interestingly enough, some of that members, so JD Vance, for example, or, Tucker Carlson, they actually, talk, the right talk.

[00:55:33] Periodically, although they also say many other things, right? But I don't see any understanding of this as being the key thing for us to resolve.

[00:55:43] **Nate Hagens:** So, so let me put you on the spot, kind of, if Someone from the Trump administration were to watch this podcast or even the next administration after that, hypothetically.

[00:55:58] And they're like, Ooh, I've heard about this Clio dynamics and Dr. Peter Turchin, and they contact you. what would be like a short list of recommendations that you would give, to slow what's coming and make it, more likely to be bloodless and, a possible, transition to something.

[00:56:19] something lower scale, but, stable, what, would be a few things that you would say?

The Great Simplification

[00:56:24] **Peter Turchin:** You know what I would do? I would do a self serving thing. I would say that we have, you know, clearly we are studying, a very, this is a very important question. How do you avoid civil war? All right. We have amassed quite a lot of data.

[00:56:40] But, there is a lot of science that needs to be done. We've been applying, we've been writing grant proposals, and they get denied, all right, because people think what we do is unimportant. So I'll, just say now, here and now, I would say that give us resources so we can, hire the historians, you know, data scientists, modelers, and then give us, four or five years, because, fortunately, research takes time.

[00:57:08] And then we'll come up with much better. much better answers for you than I could just, wing now. Do you think we have four or five years? I hope so. Why not? What we need to do is what in, epidemiology, they call flatten the curve, right? We need to flatten the curve. We need to give us ourselves time.

[00:57:28] this is by the way, what, historical example of that is the chartist period. they were able to flatten the curve because during this time, which is like 1830s, 40s, and 50s, 1830s through 1850s and 60s in UK. They actually shipped millions of immiserated population to places like Australia, and they also shipped hundreds of thousands of surplus elites to positions in the British Empire in India, Africa, Burma, and so on and so forth.

[00:57:59] So there are some ways we can flatten the curve, but what we need to do is flattening the curve just gives us time to, to get the right reforms, enacted.

[00:58:10] **Nate Hagens:** So I have a hundred more questions for you. This is like so overlapping with my work. But I want to keep my word to you because you had a, limitation on time.

[00:58:21] So I'm going to ask you just a few closing questions. I ask all my guests, do you have any personal advice to listeners of this show who are well aware of Dennis Meadows and Joseph Tainter and probably many of them have. I've read your book. they're aware of the, times that we live in.

The Great Simplification

[00:58:39] do you have any personal advice on how to manage this? Whether the listener is an elite or a commoner, you know, just general audience, about 40 percent of our listeners are in the United States. The rest are international.

[00:58:53] **Peter Turchin:** Especially to the young people, I would say this, that there is no impenetrable border between commoners and elites.

[00:59:00] So become elite. You know, there are a variety of ways you can do it. You can, start, you know, start up a business, earn, you know, a hundred millions, and then you could use that money to fund social movements or, become influential blogger. Or, you know, work your way up, you know, in the administration and acquire power that way.

[00:59:22] And then also organize, associate with other people, spread, the better ideas. Don't, be, tempted by violence. So those are, very simple, you know,

[00:59:38] **Nate Hagens:** suggestions. Try to get some social power and use the social power for pro social ends.

[00:59:44] **Peter Turchin:** Exactly.

[00:59:45] **Nate Hagens:** Yeah. Thank you

[00:59:46] **Peter Turchin:** for formulating that.

[00:59:49] **Nate Hagens:** What do you care most about in the world?

[00:59:51] Professor Turchin? The truth.

[00:59:56] **Peter Turchin:** I'm a scientist first and foremost.

[00:59:58] **Nate Hagens:** No one has ever answered that question that way. I, care about the truth too, and I'm trying to unpack it, hour by hour, week by week. By week, if you could wave a magic wand and being a scientist, you probably don't like this, concept, but there was no personal recourse to your future.

The Great Simplification

[01:00:17] What is one thing you would do to improve human and planetary futures?

[01:00:23] **Peter Turchin:** Well, am I also a world dictator?

[01:00:27] **Nate Hagens:** Yes.

[01:00:28] **Peter Turchin:** Yes. well, then I, actually know what to do if, I, but all of those world dictators, they tend to have their heads cut off. but yeah, I would just, first of all, I would, go to Washington and, install myself as the dictator.

[01:00:46] And then I would select, better people who have an idea of what needs to be done. And some of the politicians would be opposed from the Democrats and from the Republicans, right? get, the, social scientists, economists, sociologists, and so forth, and so on and so forth. But the, but you know, this is completely ridiculous.

[01:01:07] **Nate Hagens:** Well, it is ridiculous, but it acts as an Overton window of what actually might work and then it, it, expands the horizon and we might move in that direction. What you're saying is instead of politicians seeking personal power to somewhere in the government have technical capable people with social science, natural science, system science, at high levels of authority.

[01:01:38] **Peter Turchin:** And, one thing is that I would definitely not do, I would not say that, okay, do this, that, and that, because that's not, even if you're addicted. That's not how things work. You need to, the most important thing that the dictator can do is to appoint the right people, right? You need, that's because all action is collective.

[01:01:59] All good action is collective action.

[01:02:01] **Nate Hagens:** So, for anyone interested in the details, of how you analyzed all these trends and your work. field called Clio Dynamics. Is there somewhere they can read about the methods you used in your modeling? How do they find more about your work? Sure.

The Great Simplification

[01:02:17] **Peter Turchin:** in fact, in, in, end times, there is an appendix, there are three appendix chapters and there I tried to explain what Clio Dynamics does in non technical language.

[01:02:28] And do you have a

[01:02:29] **Nate Hagens:** website or something where people

[01:02:30] **Peter Turchin:** can find it? I have a website, PeterTurchin. com.

[01:02:33] **Nate Hagens:** Okay.

[01:02:34] **Peter Turchin:** Right. so that's, and in fact, I am planning to restart my blogging. There were some reasons why not, but that's actually will happen before the end of the year.

[01:02:45] **Nate Hagens:** So this has been wonderful. I think we just scratched the surface of this.

[01:02:51] we've talked about elite overproduction and immiseration and how this has worked out in the past. If you were to come back on this podcast, Peter, what is one topic that you have a particular passion and interest in relevant to our future that you'd be willing to take a deep dive in?

[01:03:10] **Peter Turchin:** Yeah, I'm not whistling, but it depends on what will happen this year.

[01:03:15] All right, because if we are in, in the middle of a hot civil war, then, we would need to be thinking about how do we end that. But if there is, a lot of, you know, intellectual turmoil about how, what do we need to do to, to, to what kind of reforms need to be adopted, that would be a very different conversation.

[01:03:41] When you leave history, this is actually, You know, you have to, adopt, adapt, adapt.

The Great Simplification

[01:03:49] **Nate Hagans:** So, well, let's, see how things are and then six or nine months and, maybe you come back. thank you so much for your important work and, please make sure to, read some fiction and watch some Netflix, at times.

[01:04:03] Yes. You'll do that. If you enjoyed or learned from this episode of The Great Simplification, please follow us on your favorite podcast platform. You can also visit thegreatsimplification.com for references and show notes from today's conversation. And to connect with fellow listeners of this podcast, check out our Discord channel.

[01:04:27] This show is hosted by me, Nate Hagans, edited by No Troublemakers Media and produced by Misty Stinnett, Leslie Batlutz, Brady Heine, and Lizzie Sirianni.