Zak Stein (00:00:00):

In the arc of history, the economy and the technology always flies past the educational system in a way that makes for certain danger. It's precisely the discontinuity I'm pointing to, this generational gap that gets bigger and bigger as technology accelerates.

(00:00:17):

The first time you even get the sense of a generational gap is in the '60s. And then, it becomes a topic, and then you get the whole thematization of generations. So, that notion that there is an acute lag between the education and the technological development that occurs now in our time, of hyper innovative, hyper capitalist, acceleration essentially. In that sense, the schools are decades behind.

Nate Hagens (00:00:49):

I'd like to welcome philosopher and educator and friend, Zak Stein. Zak is the co-founder of the Center for World Philosophy and Religion. He currently works at Civilization Research Institute. He's the author of dozens of published papers and books, including Education In a Time Between Worlds.

(00:01:11):

We discuss what is wrong with our education system. Zak believes that education and the problems with it are at the root of the metacrisis. He's got some rather radical suggestions on how to go forward, but I think his general take on what's lacking in our current education system, which is too based on metrics and standards and less on actually learning, there's a lot there that I agree with.

(00:01:45):

This is a long and interesting and deep conversation with a big mind, Zak Stein. Please welcome Zak.

(00:01:55):

This conversation is long time coming, long overdue. I wanted you on this show two years ago.

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Zak Stein (00:02:03):
Yep.
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Nate Hagens (00:02:03):

And I imagine we've both learned a lot in those two years, so it's better for our viewers that you're here today.

Zak Stein (00:02:09):

Yeah. Agreed.

Nate Hagens (00:02:11):

So like me, obviously you've taken a pretty wide lens looking at our global systems, what we might call the metacrisis. What has been your path, your work life up until now? And maybe just give a brief snapshot on what you're doing now.

Zak Stein (00:02:29):

I was a musician first. And then, I became a developmental psychologist and an educator, as it were. I went to a graduate School of Education, and studied human development.

(00:02:40):

I was dyslexic, so I was always a little bit reflective on the educational system, and that became my practice, professionally, which was just to think about these things as a participant observer. I got really focused on standardized testing for a bunch of reasons.

(00:02:57):

In graduate school, I was focused on deep philosophical theory in education and human development, revolving around issues of justice and fairness and testing. This led me to realize that it was possible to break an educational system. It was possible to actually do something so sweeping with a policy, for example, No Child Left Behind, that you could ostensibly break what the educational system's function was, which was to facilitate intergenerational transmission, allow the next generation to step into responsibility and capacity, and confront the problems that civilization's addressing. You could break that, and then you'd have this civilizational collapse. And I didn't know there was a field that studied civilizational collapse. I'd never heard of the term, catastrophic risk, or existential risk, or any of that stuff, but stumbled on what, in retrospect, would be called a Tainter dynamic, Joseph Tainter who you had on, I believe. The standardized testing industrial complex in the American public educational system ended up having this diminishing returns on investment and complexity dynamic, which meant that they kept trying to solve this problem through testing, and was actually making it worse, and then wasn't able to see that they were making it worse, and then, this compounding iatrogenic spiral of testing. And-

Nate Hagens (00:04:22): What was that word you just used? Zak Stein (00:04:25): latrogenic spiral. (00:04:26): Yeah. So-

Nate Hagens (00:04:26): I don't know what that is.

Zak Stein (00:04:28):

latrogenic just means damage done by a doctor, for example, is the most strict technical term. But it more technically means damage done with the intention to heal. You're putting the standardized testing system in place with the intention to fix the system. But in fact, the thing you're doing to "fix it" is actually making it worse. But because all your optics are built around that way of fixing, you can't even see that it's your way of fixing that's making it worse. So, this becomes a spiral that's tied into that dynamic that Tainter recognized, which is a common bureaucratic pattern of just keeping throwing more complexity and money at the same problem in the same way, when you should just switch tactics entirely or redefine the problems faced, basically. I saw that pattern then, in 2015, met Daniel Schmachtenberger, and then had this whole encounter with the field of existential risk and catastrophic risk. At the same time, I'd been working with Ken Wilber and Marc Gafni in the space of integral theory. So, I was taking this broad meta-theoretical view of the whole world situation. And I actually heard the term metacrisis at the 2015 Integral Theory Conference for the first time, which is where I met Daniel.

(00:05:50):

This convergence of thinking about human development in a fundamental way, seeing that there is a way to actually destroy civilization, rooted in mishandling human development, rooted in breaking the educational system, and then being plugged into this much broader discourse about all the ways that you could make a civilization self-terminate, to bring some of Daniel's language in. But as an educator, psychologist, philosopher type, not a technician, scientist, as it were, hard scientist or ecologist, or something, that are focusing a lot on worldviews, skills, and educational crises, legitimation crises, and a whole bunch of internal psychological dynamics of the metacrisis, and the tremendous amount of educational, we need an educational renaissance in order to address the metacrisis. As much as we need incredible economic and technological innovation and political reform, and a whole bunch of other things, we need a type of educational renaissance that we haven't seen in human history.

Nate Hagens (00:06:57):

I have lots and lots of questions for you. First of all, jumping off what you just said, is there any anthropological research that shows different cultures or civilizations in the past imploded or collapsed or went into senescence because of lack of development or education? Is there a way that we could research that? Do we even know?

Zak Stein (00:07:26):

There's ways to make reasonable inferences. If you look at the collapse of the Roman Empire, for example, what you have there becomes a bureaucracy that becomes so bloated, and also corrupt and complex and fragile, that it becomes hard for the elders to actually pass along the entirety of the tacit knowledge needed to maintain the thing. It's a way of thinking about institutional decay or other dynamics that just put a drag on the ability of the civilization to adapt. So, you can presume that, in a case where other institutions are decaying and where the overall complexity of the civilization outstrips the leadership, that they're not going to be able to pass on to the next generation what is occurring. That's inferences you can make across a bunch of different data.

(00:08:24):

But then, when you look at major turnings in civilization, if you look at, for example, the transition from feudalism into modernity, let's say, from feudalism into what we know now as nation state capitalism collaboration, that transition was, in a very fundamental way, an educational transition, which meant that the feudal education systems simply weren't keeping up with the printing press, and the kinds of accounting and the kinds of technology that were moving history beyond what these educational systems were able to do, quite antiquated. And the move through to the Enlightenment gives us this whole new notion of education, of public education, where mathematics, science, literacy is universal. That was not the meta-curriculum of the prior civilization. It was an emergent one. We're facing a similar need of transition to new civilizational, let's say, meta-curriculum, very fundamental new types of literacies and capacities, if we don't want the whole thing to completely go off the rails.

Nate Hagens (00:09:37):

I'm just thinking about our modern last 50 years. It's almost like our culture, our objectives, our technology, our governance, our discourse, our social media, all that is evolving and changing rapidly, but the education system doesn't move hardly at all, just 1% or 2% at a time. I taught college not that long ago. A lot of what we're teaching is trivia and facts and figures that mattered the last century that are not real equipped to prepare young humans for the next 50 years. So, education is too slow. The whole education system has a built-in metabolism and momentum that's hard to shift. Is that an accurate statement?

Zak Stein (00:10:34):

Yes and no.

(00:10:38):

In one sense, educational institutions are the thing that can serve the culture. So, in one sense, educational institutions are, almost by definition, conservative. Because they're saying, "Here's what we used to do." They're saying, "Here's the elders speaking to the youth." In that sense, there's a way in which you don't want every new fad to sweep through the educational system and just change it. In fact, you want a-

Nate Hagens (00:11:00):

Okay.

Zak Stein (00:11:00):

... certain amount of due diligence in doing radical educational reform.

(00:11:06):

For example, No Child Left Behind was an example of absence of concern about second, third order effects of sweeping radical change. And it was the first time, with the exception of the civil rights movement, that the federal government overrode the rights of states in the United States to set their own internal testing policies, and other things. That was an example of rapid change in the educational system, which was actually not great, because of its rapidity.

(00:11:35):

But there's a bigger thing that you're pointing to, which is that, in the arc of history, the economy and the technology always flies past the educational system in a way that makes for a certain danger. It's precisely the discontinuity I'm pointing to, this generational gap that gets bigger and bigger as technology accelerates.

(00:11:57):

The first time you even get the sense of a generational gap is in the '60s. And then, it becomes a topic, and then you get the whole thematization of generations, again, as it were. So, that notion that there isn't a acute lag between the education and the technological development that occurs now in our time, of hyper innovative, hyper capitalist acceleration, essentially. In that sense, the schools are decades behind. That's why the kids are completely won over by the technology. The schools have ostensibly lost to the screens. And most reflective educators are fighting that battle. One of the reasons that the schools are so subject, I think, to a certain kind of identity politics, and a certain kind of focus on the wrong things, is because we can't address how fundamentally off the nature of these schools are. We've quite antiquated institutions.

Nate Hagens (00:13:06):

I'm sure we're going to get to this, but you're aware of, and even working on, alternative education models to the conventional K through 12 and university system.

Zak Stein (00:13:17):

Mm-hmm.

Nate Hagens (00:13:18):

In those successful examples around the world right now, do they make rules and strictly forbid screen use? Or is the educational experience so interesting and rewarding to the student that they lose their compulsion to use screens all the time?

Zak Stein (00:13:42):

It's a really good question. There's different views, I would say. There's at least two or three different views. I know of places, and this includes certain Waldorf schools that are extremely successful, and then also secondary college, especially micro colleges as they're called, which are quite interesting, where you go there precisely because you don't bring your screen. And there's a very deliberate engagement with technology, and there's a detoxing as part of the curriculum. That's one view. And I think that's very important. There's actually research going on now studying the effects on young kids of not being with their screen. But you have to get how ubiquitous that means the screen must be if we study the effects of not being with it. You go to summer camp, and they take your phone away. And what is it like two, three days in? The kids start having withdrawals, basically. So, there's a detox perspective. There's a "come back to it after you've been completely detoxed from it, and see what it's like." I've seen that model.

(00:14:44):

But then, I've also seen the model, even in monastic communities, where they're actually saying, "No. You need to be able to deal with the presence of this thing all the time. You need to go a little bit more cyborg, and begin to think about what it means to be adapted to the existence of technology." But that means then, you need to do technology education. Then you need to know what you're actually dealing with. Yeah. Because I think most young people don't realize how predatory the technologies are, how extractive and exploitative they are. I think if they knew that, they would actually be a little bit more concerned/rebellious against, "the man" is basically extracting and exploiting you as you're having fun on social media. But it's hard to paint a clear enough picture of that. So, I've seen this other class, where they're like,

"No. We have to live with these things." That means understanding them, and that means beginning to adapt and to build our own technologies to our purposes.

(00:15:45):

And I think they're both right, but as you can see, they're both a little bit extreme, as it were.

Nate Hagens (00:15:51):

Why don't you hypothesize on this? If there were a program so that kids could be behaviorally, vertically, horizontally stacked, where they have the right nutrition, the right sleep, the right exercise, the right community, the right psychological development, friends, oxytocin all around, coupled with an education about what social media is doing to all of us, but especially to teenagers and young adults, is it possible then that those young humans could choose and have the constitution and awareness and willpower to make screens a small part of their life, consciously? Is there any evidence of that? Or what do you think about that?

Zak Stein (00:16:47):

It has been suggested to me by McLuhan scholars, people who study the evolution of technology and communication technology, and who have a kind of theory of generational change from that, that the youngest people are seeking a return to reality. That in fact, it will not be hard to create the types of environments where adults are requested by kids for boundaries to be set around technology. And that's another thing about human development, where there's some misunderstanding. It's very important for adults to set boundaries for children, and children want them set and feel safe and cared for when they are set. There's a sense of irresponsibility on the adults' part to just not simply set the boundaries, which the kids now know we have good reason to set. That's weird, that the kids know that these things in a certain sense, they've seen The Social Dilemma or whatever, and they know, "This thing's bad for me. And yet Mom's not setting a boundary, or Dad's not setting a boundary, or school's not setting a boundary, or society's not stopping the companies from preying upon me." There's a sense in which there's going to be a call for that. But there's also generation arguably lost to it.

(00:18:04):

Because designed to be addictive, and to dysregulate your limbic system. That's not a second, third order effect. That's a design intention. That's intentionally designed to do that. That's the other thing is, that if we really educated them, I think the companies would go out of business. Because then they wouldn't be used.

Nate Hagens (00:18:22):

We've had conversations about this before, where you think the lack of a sufficient and updated education system is at the root of many of the crises we are facing, especially in the United States.

(00:18:41):

What percentage of that education being at the root is the screens and the addiction to dopamine and scrolling and technology, and how much of it is the education itself?

Zak Stein (00:18:54):

It's very hard to tell, at this point.

(00:18:57):

But I know that, in the '90s, in the 1990s, before you could blame the screens, is when you started to get the ADHD phenomenon. That's a whole other conversation. I'm not going to talk about the medicalization of academic under-performance. But the point was that academic under-performance became so severe that they had to medicalize it. And medicalizing it means you blame the kid's brain, when in fact another inference is, the school must be systematically failing if so many kids can't even pay attention. There's the canaries in the mines in the '90s of the irrelevance and ostensible hypocrisy, that the reflective smartest adolescents have to cynically buy into a zero-sum game with their friends. So, the hyper competitiveness of it that one of the most competitive experiences of your life will be college admissions, and that all the adults are cool with that sets a tone.

Nate Hagens (00:19:56):

That's just not in the United States, though. There are people in Korea that commit suicide if their kids didn't get into college, and crazy stuff like that.

Zak Stein (00:20:07):

This is why I studied testing. Testing destroys people's lives. Testing creates suicides. You have whole grade school classes with ulcers in Connecticut. You have entire school districts, from the top down, cheating. Testing is a remarkable phenomenon. Large scale standardized testing has incredible second and third order effects.

Nate Hagens (00:20:33):

We're supposed to be educating and preparing these young humans for the world in a learning environment, but instead we're putting them through fight or flight cortisol and other endocrine cascades.

Zak Stein (00:20:48):

Correct.

Nate Hagens (00:20:48):

Is this a global phenomenon, then? Or are there some cultures that are doing it much better?

Zak Stein (00:20:56):

It's interesting. In one sense, it's a global phenomenon, in so far as one definition of civilization would be. There's this argument, are we in one civilization, or there are many civilizations?

(00:21:11):

One argument that we're in one is that there is a universally agreed to bureaucratic standards for educational achievement, which is to say, basically, a PhD from XYZ University counts anywhere in the world. Other ones don't. And this is true. China sends their people to Berkeley. So, in that sense that the standard set, especially by the post-war United States Research University standards, which was a military industrial success, the post-war American university system was incredible. It's worth talking about the breakdown of that. But it set that global standard. It is very much a universal phenomenon.

(00:22:03):

And now, the competitiveness, specifically with the youth, isn't as bad in some places, but they tend to be places like Scandinavia, or places that don't have large-scale schooling and testing. Because they're a country that doesn't have basic infrastructure and stuff. There, you'd have a different type of competitive dynamic among the youth, but it wouldn't be a test-driven college entrance like dog-eat-dog fight.

Nate Hagens (00:22:38):

In the less developed, less material cultures, do they have better education systems for what they're trying to accomplish? Or does that not correlated?

Zak Stein (00:22:51):

Again, it's so complex. Because how many kids who get into Harvard can start a fire and cook over it. Probably not that many. But you look in some of these cultures, and coming of age means you learn how to cook for yourself, you learn how to start a fire, you could skin an animal, you could grow food, you could be alone in a dangerous part of the city by yourself. There's a bunch of things that occur in socialization without schooling in "underdeveloped" areas, where these kids have by some standards, way more intelligence. Now, they would fail all the tests and they wouldn't succeed in school, because they haven't even learned to read, essentially, I'd say that's the case. You almost can't compare.

(00:23:42):

Now, of course, there are places in the of global South where you have a two-tiered, and you do have actually access through their school systems to American colleges and graduate schools and their own schools. But the reach of the large-scale public schools in the western industrialized democracies, that's a thing. A lot of people are in the clutches of that specific kind of educational system.

Nate Hagens (00:24:20):

Was it always this way? Fifty, 100 years ago, was the US education system that way? And the reason I ask is, I wonder if global GDP boosted by debt and energy, and now AI, creates this ring of power that captures everyone. "And this is how we have to compete." And it's that. It's that cultural goal for material excess that is underpinning the testing and the competition, even as younger and younger humans. Do you think there's a correlation there?

Zak Stein (00:25:03):

Absolutely. And you can see pretty early on that the competition between the great powers that has defined the 20th and 21st century, involved the radical experimentation with large-scale education.

(00:25:25):

Some of the most sweeping changes in American education come following the launch of Sputnik. It's like one of the most well-known vignettes in American education history, is that the Russians launched Sputnik. And our reaction is to completely change the American public educational system to compete with the Russians, ostensibly, to institutionalize the SAT, to build out an entire program on science. That's where we get STEM from, basically. That whole thing emerges basically from the Cold War. That's just the way it has been for a long time.

(00:26:04):

And before that, you have similar things, where if you want to compete as an industrial nation, even in the 1800s, you need a school system that looks a lot like a factory, so that the kids can go be in the factory. That's, again, another demonstrated thing, the correlation between the way the means of production are organized in a particular society and the way the pedagogy is organized in that society, usually isomorphic, so that, if the kid's going to have a job where they're ringing a bell, he's going to be in a school where they're ringing a bell. And that was part of, again, the competition between powers was that, in the 1800s, our school system was radically reform-based to bring in all the immigrants, and to get the immigrants prepared to go into the factories.

(00:26:50):

The aristocrats who ran the factories had private school that didn't look like factories. It's a complex conversation, but yes, in a way, you can't think about the history of education without thinking geopolitically and economically. And that's the case now, for sure.

Nate Hagens (00:27:10):

In contrast to what you just said, do today's aristocrats, the rich elite, do their kids have better education? It seems like they probably just have better teachers with the same testing and competition and fight or flight dynamic for their kids. Yes? Zak Stein (00:27:32):

Well, I'll say two things.

(00:27:33):

One, it's one of those, I think, an urban legend, but it's probably true, that the people who make a lot of money in Silicon Valley send their kids to school where there aren't computers. You hear that. You hear that. Where it's like-

Nate Hagens (00:27:49):

Is that true?

Zak Stein (00:27:49):

I believe that it is true, that disproportionately, you get in places where there's high wealth, people opting into situations where they can get their kids removed from the technological surround that's normative for the other public schools, where they're actually training the kids to use iPads all day. Your kid gets to go be in a forest all day, and doesn't look at and do this. So, there's that phenomenon.

(00:28:14):

But the other factor is, the Ivy League elite college access competition does of course also affect those. That's one of the distinguishers of being distinguished. Another way you can trace civilizational collapse is actually the breakdown in elite signaling mechanisms, which is to say, inter-elite competition, which is the overproduction of elites, which is an educational crisis, meaning that there's nothing that signals actually that this guy's cognitively better than that guy. There's nothing that's signals that this person's better trained than that trained. Because the overall gaming of the system has been such, the cheating and the entrance scandals, and all of those things, that add up to make it so that just doesn't mean what it used to mean to go to some of these places anymore. I would argue that people, the truly avant-garde "elites," would probably be getting their kids out of that rat race and into some other less visible rat race.

Nate Hagens (00:29:20):

At the core of this, Zach, is almost a philosophical question, which is what is education for? I think there's the classic liberal arts education where we want to expose young

people to as many things about the world that they should know to have a broad knowledge of the world. I don't know much about the history of education, but it seems to me that right now, the goal is to prepare people to get into the workforce, to help economic growth is really the goal of education.

Zak Stein (00:30:00):

Now you've hit the nail on the head. Most of the discussion of education never actually gets to this question, which put more frankly is just what is a good life? What is valuable? What's actually valuable? What are the lessons that we should teach young people about how to be a good person, about the right ways to act in the world?

(00:30:25):

It's very, very simple questions, which should be at the core of education, which are actually not answered well by secular public schools, which is worth noting because they're specifically designed not to answer questions about the meaning of life. They have the civic religion, which functioned pretty well in the United States.

(00:30:48):

You have the American, civic religion, where yes, you're in the school to be a good citizen, and then you have a kind of 21st century skills view, which is that you're being trained to be a participant in some kind of global workforce, like an accepting, multicultural global workforce because that's an admirable thing.

(00:31:13):

The fact of the matter is that we're running a civilization on a culture that doesn't have clear answers about really fundamental questions about value, which is to say the content of education, the thing we're teaching. We've been running off of fumes of pre-modernity because the answer to what is a good life, it's actually, this is a religious question. What's a life that has not been misspent? Is there a non-arbitrary answer to that, which means an answer that's better than another answer.

(00:31:53):

Not everyone's answers to that is equally valid, which is the default assumption we have now as a culture. Actually, no, there is a better or worse answer to the question of what is a life that has not been spent? What is a good life, which means what

should we teach our children to become like, and what should we allow them to grow into or shape them away from? These are the questions that educators have to ask, which are deep, normative ethical questions about value.

(00:32:22):

The collapse of value at the center of culture, meaning the inability to use what Charles Taylor called languages of strong evaluation, makes it so that yes, slowly the effectiveness of the educational system starts to really wane. That's the educational renaissance I'm talking about now is actually a return to a different way of speaking about value at the center of culture, which would be non-relativistic, which would have to boot from a different kind of metaphysics than a metaphysics that suggests to us that the universe itself is without meaning and that the emergence of the human is completely by chance.

(00:33:02):

Just worth saying, there's never been a civilization that has run on the idea that it itself is meaningless, that the value it creates is up to us and doesn't matter to the universe. Hard to invest in a civilization that claims itself to be arbitrary, which is where our civilization has gone to.

(00:33:24):

I'm talking about Yuval Harari, and people who are at the center of culture who are espousing a subtle kind of values relativism, which ends up being insidiously seeping into the educational system, makes it impossible for us to speak in normative ways about the shapes of the personalities and dispositions of the youth, which it is our responsibility to be in a position of authority. Again, it's the responsibility, the honor of the adult to be able to set boundaries.

(00:33:53):

We're confused even about the legitimacy of asymmetric power, period, which is again based on the confusion about value. The work with Gaffney Wilbur, this new book is about this question, what's the core of the issue? It's actually value. Why stop the metacrisis if in fact the universe could give a shit? It's a simple way to say it and it's a little bit provocative, but when you deal with young kids, they ask very simple questions, very simple questions about why adults do the things the way they do.

Nate Hagens (00:34:34):

If the universe doesn't care, and humans found ourself here in 2024 as an emergent process of stardust eventually developing consciousness. I think that's, to me, incredibly empowering and makes me feel like what I do on my time here on earth is really important towards steering towards something lasting or more beautiful or better than we have today. I much prefer that story than the alternative.

Zak Stein (00:35:07):

Which alternative do you mean?

Nate Hagens (00:35:10):

That God created on the third day and weird products of that and he's got our back and just go out and do good.

Zak Stein (00:35:23):

Right, so this contrast between a creationist story and a story where the universe is fundamentally meaningless. I'm saying that's an interesting and false dichotomy, which is to say deep conversations to be had about the second part of what you said, which was that wanting to create a world that was better, that was more beautiful, that was lasting, which is an appeal to some fundamental set of values. It's an appeal to a sense that those things matter. My only subtle intervention into the worldview is do those things matter just to you or do they actually matter, which is to say is the moral field, which is to say the field of value, as real as the physical fields? We live in a culture where of course the physical stuff is real, but the other things that bind us like love, obligation, ethics, commitment, that these things are not real and in fact, as arbitrary or much more arbitrary than physical law.

(00:36:43):

That didn't used to be the case in human worldviews, it's worth noting. Most human worldviews ran on the idea that value was intrinsic to cosmos and that humans participated in value and continued, and extended, and expressed value that pre-existed them, and they attuned to a value which would be there, whether they were there or not, which it was their obligation to attune to more. That's been more like the dominant view.

(00:37:11):

The modern view, again, part of the meta curriculum of our civilization has been in fact that no, issues of value are arbitrary and you can't think as a realist about value. Ian McGilchrist, for example, argues that value and consciousness are equally primordial to universe and long of time space matter.

(00:37:34):

That's the view that I'm espousing, which would make us non-relativistic about issues of value, which would mean that when we said we want to make the world better, we're able to say actually better, not better up to me, we're better with people who agree with me and hopefully we win in terms of power, but actually we can have a non-arbitrary discussion about the nature of things that are intrinsically valuable.

Nate Hagens (00:37:57):

What does that mean, non-relativistic?

Zak Stein (00:38:00):

Relativistic would be that your view of the good life and my view of the good life, that if they're very different that that's fine. In one sense, that's okay but in another sense, if they're different enough that your view of the good life squashes, mine doesn't allow me to live mine, whereas mine would allow you to live yours.

(00:38:25):

I would say that the one that allows you to live yours is better than the one that actually doesn't allow other visions of the good life to live. That's an example of a Rawlsian or Habermasian view where you can say okay, let's talk in a non-relativistic way, which is to say a way that doesn't end up allowing... Again, this is basic ethics and philosophy.

(00:38:51):

There's relativistic ethics, which is saying basically anything goes more or less and you're not going to feel like anything goes because you were socialized into a culture but if you were socialized into a culture, you'd feel very differently about what goes. I'm saying no, actually there's a way to boot an ethics that's non-relativistic, which says that universally there are things that are true about the nature of value.

Nate Hagens (00:39:24):

Let me summarize thus far an insight that I haven't had yet. The economic Superorganism that sloughs forward trying to get low entropy inputs to increase the metabolism of the global human economy in an unthinking way, the amount of energy surplus that especially the global North has accumulated, presumably would've been enough to say wow, let's have an education system where we teach our youth how to have a good life and philosophy, and classics, and meditation, and chanting, and nature skills, and how to build a fire, and all the things, but it actually had the opposite effect, which was to train them as little ants or termites in the larger colony towards getting more surplus. The positive feedback of the Superorganism actually has also destroyed the academy and the education system in a slow release sort of way.

Zak Stein (00:40:35):

Yeah, absolutely. Again, to frame it, it's a distortion of value. If you think about what that global Superorganism is doing, what it is pursuing ultimately as most valuable for all the humans are aligned and coordinate in some way towards pursuing this thing, the goal of this thing, which is something like continuing to grow abstract value or some very strange notion that's so abstract from human experience. It's an interesting way that we've been all aligned towards a particular definition of what is valuable to do.

Nate Hagens (00:41:17):

When you say value, is that synonymous with an ethos, and ethic, a morality?

Zak Stein (00:41:25):

In many ways, yeah. You can't get ethics, a morality without some conversation about value, but value is a living thing in cosmos. We respond to value. Beauty is valuable. We are drawn to it and drawn to protect it and can justify things very fundamentally in terms of saying it's beautiful therefore X, and I would argue that what we say anthro-ontologically which would say if in the fullness of complex epistemology, there's a universality to the value of beauty.

Nate Hagens (00:42:00):

But right now, anything of value, in the sense that you just said, has a dollar overlay on top of it that imprints on the cultural perception of its value.

Zak Stein (00:42:12):

Precisely, so now you're getting it. So abstract value or exchange value as Marx used to call it, and actual value. I'm saying what's actual value and can we educate people into the perception of actual value, which would be the seeing through the simulation of value that's put forth by the global economy, which says no, don't look at the thing that's actually valuable because it's free. Look at the thing that's not truly valuable, but that we can sell you.

Nate Hagens (00:42:40):

Let me ask you a question. If there were a group of 12 to 18-year-olds or 10 to 18-year-olds and you did a double-blind test or whatever, would they inherently naturally know the difference between value and abstract value on a group of choices?

Zak Stein (00:43:01):

This would be a very important type of exploration to do in the context of different pedagogies and educational systems, because from my perception, this notion of opening the eye of value, or you can call it value-ception, which is just how do we get people to attune to actual value, is a very deep question.

(00:43:21):

Advertising it premised on doing the opposite of that and it's one of the most ubiquitous industries. There's a retraining of our ability to perceive value. What's interesting is that that is related to our ability to admit that we can say true things even if we're not scientists or whatever. That's very important to get people to know, that you can know true things and say true things, not about everything, obviously. But there's this whole class of things which we need to empower, especially young people to take ownership over the things that they know and can say that are true, that don't have to be mediated, that don't have to be given to them by an expert. That's the way up and into this conversation about what's really valuable to you.

Nate Hagens (00:44:11):

When you say value, you mentioned beauty. Can you list a few other things that would be naturally of value as opposed to abstract value?

Zak Stein (00:44:21):

Yeah, absolutely. In that book I mentioned, First Principles and First Values, there's a list of 16 of them. Integrity is one, intimacy is another, which is to say the value of becoming close while remaining separate, the value of sharing a story, like these things that are intrinsically valuable, which are an end in themselves and yet promote other goods through their actualization.

(00:44:51):

Values, net positive value becomes self-generative, and autopoetic. Again, that list. Personhood, another very key value. If you identify a value that's not arbitrary, it means you have to trace it across cultures, and you have to trace it back through human culture, then you have to trace it back through biology and physics, and so that becomes an interesting thing.

(00:45:24):

Integrity is a clear one, right? We experience integrity phenomenologically, but clearly as Buckminster Fuller, and others discussed, integrity begins, which is to say physical structures of integrity are selected for by the universe. What does it mean to be selected for by the universe? It means you're valued by the universe. The universe shows that it values integrity early as soon as it builds structures with certain things. (00:45:48):

The preservation of the existence of certain types of things by the universe itself is what we call evolution. That's a whole complex process of evaluation. This is our view as we articulated in this book, but also Whiteheadian metaphysics about the appetition of the universe and what is the universe actually seeking to maintain as it emerges and grows and evolves. Things like integrity and things like intimacy selected for by the universe itself.

Nate Hagens (00:46:20):

The last time I was with you, we had tacos and beer, and this was not the conversation. I don't remember Whiteheadian as part of the vocabulary. A lot of this is

over my head, but holy crap, you know your stuff, Zak. Let me get back to the main arc.

(00:46:40):

Our education system, especially in the United States, has harmed students, partially the development of the screens and all that, but also the standardization and measurement. Actually, before I ask this, could you articulate a few reasons why standardization and measurement has specifically harmed our students and society? We mentioned the stress before. Are there others?

Zak Stein (00:47:13):

Yeah, there's many. There's a very famous psychologist, Donald Campbell. He has this thing called Campbell's Law, and it basically means... The law, I won't do it verbatim, but Campbell's Law is something like the degree to which you make some social indicator important is the degree to which it will become subject to corruption. It's basically a Campbell's law.

(00:47:35):

He applies this to standardized testing specifically in schools. He's like listen, and this was No Child Left Behind. It was high stakes decision-making hinged upon the outcomes of these tests both for the individuals and for the school districts, and for individual teachers. What's the chance that they're not going to focus all of their attention on the test? Even if they don't cheat, just by completely distorting the curriculum to perform well on the test, the test fails to be an index of the quality of the curriculum. See what I'm saying?

(00:48:08):

They want to see how the curriculum's doing. They don't want to see how well you test prep, but they end up seeing how well you test prep. You're both scamming the test and completely dishonoring the kids because you're not actually honoring their curriculum, you're just getting a sense of what's going to get the test. That's an example, without cheating, of just the incentivization of the standardization ends up driving us towards this truncation of what's possible in the curriculum where all the curriculum becomes test prep, even though the goal was actually to use it as just a measure of the existing curriculum. The distortion field created by that type of testing practice is profound.

Nate Hagens (00:48:46):

You and I have talked in prior years about nature versus nurture and the fact that all humans, our phenotypes today are a product of selfish and cooperative bottlenecks in our past, and that we have both in our wiring. I guess what I'm hearing is that our education system steers young humans towards the selfish individualistic as opposed to the cooperative, collaborative wiring in our nature because of this testing and this competition, when there should be more learning and collaboration. Is that a valid statement?

Zak Stein (00:49:37):

Yeah, if you predicate testing on the idea that it's a competition, then you create an environment where each of the players in there were acting in their own interest, and you don't have to use testing that way. You could decouple it from high stakes decision making. You could use it as a measure, but without having the measure be such so high stakes that it distorts all the practice. You could just use it as an observational measure and not actually couple it to lead to decision-making. High stakes is a huge part of it, standardization is another part of it, and then the faulty psychology is behind the test development themselves.

(00:50:19):

That's the other thing is that they are running bad psychological models to create the test or not even thinking about psychology when they create the tests and then therefore, giving over to students languages of self-understanding that are apsychological or confusing and non-psychological. What does it mean to have an SAT score that's X, Y, Z? Why would you want that to be a part of your self-understanding? It's not.

(00:50:46):

They don't tell you why you got that score or what it means about your capacities or even what you could do to get a better score, so what it ends up doing is making it so again, no languages of strong evaluation. We're confused about how to think about our own skills because we're in a context of evaluation that isn't psychologically sophisticated.

Nate Hagens (00:51:07):

Let me ask you this. Where I was going with that previous comment is that once school is done and they're 23 and in the workforce, does that embedded stress and competition carry over into their professional careers?

(00:51:25):

It's a two-part question. Does it carry over for those that did score highly and were competitive, is it a positive feedback and does it have some sort of a boomerang effect on those that might be very well-adjusted and very great human potential, but they're not good at scoring standardized tests, and so they were in the bottom two quintiles of scoring. Does that then impede their future progress or their psychology or whatever in our culture?

Zak Stein (00:51:57):

Yes. It's funny because like to the extent that we want adults to collaborate and work together and resolve problems in ways that are cooperative and not hypercompetitive. We should have schooling environments that are getting kids cooperating about the most fundamental problems that they're working on. But the most fundamental problems that they're working on is their own advancement through the system, even if there's not testing.

(00:52:22):

The other thing is you could take away the test because a huge anti-testing movement, which goes too far in the other direction. Even if you take away the test, we're still in a situation where we're not having honest conversations with kids about their future and very radically funneling different types of opportunities through these competitive bottlenecks.

(00:52:42):

If you're not in a testing environment, then you have to do all these internships and after-school programs and other things, and think three years ahead about the college admissions thing and look at your friends suspiciously and what they're doing with their after-school activities. All of that comes in, even if you're not test-driven, there's still the competitiveness.

(00:53:02):

It's funny because we almost can't imagine an educational system that would be built in a fundamentally different way, which would be one that distributed access to educational resources differently because the issue is that it's how do we actually distribute the educational resources in a way that facilitates this process of intergenerational transmission so that the civilization can not self-terminate.

Nate Hagens (00:53:30):

You've made it clear that our education system is not working and in many ways could be a disservice both to the young humans and ultimately to our society. That's the system. What about teachers within the system? A part B question would be parents. Do you think it's possible to give every child an ideal teacher under this institutionalized education system? What is the role of the teacher and the parent given the backdrop that you've laid out?

Zak Stein (00:54:08):

Totally. It's useful to make a distinction between education and schooling. Mostly, we've been talking about schooling. In that context, teachers in certain types of school systems are the reason that the thing is working at all. The reason that we have the success we do, I believe, even though the school systems are so antiquated, is because teachers are some of the hardest working people that you'll ever encounter. It's very important to get like I am opposed to many of the existing structures and practices, but admire teachers in all walks of teaching.

Nate Hagens (00:54:57):

If you had a really good teacher today, that person could offset a lot of the-

Zak Stein (00:55:04):

They could change everything. Not everything, but they could change a lot. Where I was going was to this point of teacherly authority. It's a big concept that I use and it ties into all of this stuff about value, but we're not going to go there. But teacherly authority is very important.

(00:55:19):

This is where I sit there and you're the teacher and I'm the student, and we're discussing something. This is basic triad of education. You're the elder, the youth, and the thing being discussed, or the person with more skill, the person with less skill, the thing that requires skill, that kind of relationship.

(00:55:37):

Legitimate teacherly authority is a very real anthropological phenomenon. Now, my guess is that it goes way back. It's one of the things that distinguishes us from great apes is that we have long duration educational experience that involves this type of legitimate teacherly authority, which is that we both know there's an asymmetry of skill. We both know you're more skilled, and I, the person with less skill really want to learn, and you totally want to teach me.

(00:56:04):

It's a situation of where you have authority over me that I grant you and I give you legitimate authority to help me shape my mind because we both recognize that you have this greater capacity, and I really want to learn this thing. That's legitimate teacherly authority. That can occur anywhere, anytime without any kind of institutionalized context.

(00:56:27):

You hang out with farmers and stuff, so if they have some practice that you've never seen before and you want to learn from them how they get that particular type of crop grown in that way, or manage those cows to not do that thing, even though the cows could totally do that thing, how'd you get them to behave? You would drop into that relationship and you would never thematize it necessarily with them. You wouldn't be like hey, man, now I'm the student and you're the teacher, but there'd be this assumed backdrop of, okay, legitimate teacherly authority.

(00:56:56):

That's a known thing, and it's very powerful and it's very important to be able to recognize that that exists because most of what we encounter with teacherly authority is in bureaucratized contexts where you have teacherly authority over me because of your position in this bureaucracy that I'm a part of, AKA a school. That means there is not necessarily a strong correlation either between my wanting really to give you specifically my authority over me, and B, you actually having an asymmetry of capacity, meaning are you really, really smart at this or are you just teaching some curriculum and I kind of know it, and if I could have my choice, I wouldn't be learning this at all. I'd be learning something else.

(00:57:42):

Illegitimate teacherly authority, bureaucratically sanctioned. Illegitimate teacherly authority is the worst thing because that's a situation where you have bureaucratic authority over my mind, but you don't have greater capacity and you don't have my best interest in mind. That bleeds into propaganda basically as another class of asymmetric relationship, which is basically, so the other thing about the teacherly authority is that he wants you to learn, and in the ideal world, you graduate and you don't need the teacherly authority relationship anymore. So that's key to legitimate teacherly authority is that it's temporary. Legitimate teacherly authority is predicated on the idea that you learn as much as me and surpass me, whereas illegitimate teacherly authority or propaganda is predicated upon "No kid, you'll never actually learn the secret codes or actually learn how we thought about this little bit of dogma, which is kept behind the closed doors." Or just they're training your mind but not with your best interests, whereas a legitimate teacher, there's this cooperative relationship with the student to clarify the value being pursued.

Nate Hagens (00:58:52):

What percentage of our teachers would fall into those two categories, K-12 and college? Just broad spitball guess.

Zak Stein (00:59:00):

It's going to vary a lot. It's going to vary a lot from place to place, so I would be hesitant to do that.

Nate Hagens (00:59:06):

Okay, so that's the teacher. What about the parent? Because you talk about education versus schooling. I mean if wide boundary lens education includes everything from the moment we're born and when we come home from school and do whatever we do at home. So how important is the parent here in this story about our education that you're talking about?

Zak Stein (00:59:29):

I mean, it couldn't be more important. If you think about a civilization, and it needs at least two things to run. It needs the biophysical substrate and it needs the human substrate, if I can speak in crude terms. The core of the human substrate, reproduction, is the mother in the family, which means that the time in utero, the first months, the first years, the solidity of those environments do more than almost anything else. And so you can judge a civilization's likelihood of success in the long run in terms of where it sees value and does it see value there? Does it say actually the core of this whole thing exists right in that little relationship between the mothering one and the child and whatever that nest of caregivers that surrounds the child is that allows it to be brought into the world in a way that is humane and fully attentive. (01:00:32):

So the very base of the stack you have that need for a very healthy fundamental kind of nest. And then as you get older, you end up, yeah, the parent is the main modeler of legitimate teacherly authority. So the parent's main responsibility in my philosophy of education, bear with me, would be that, would be to be the first way you model legitimate teacherly authority. And the main concern I have now is the confusion of teacherly authority, both through the bureaucratization and through the mediatization, meaning social media, meaning influencers, and then eventually generative AI who claim status as teacherly authority over thousands, millions of young people. So there's this transformation of teacherly authority in the digital that disrupts the ability of the parent to model teacherly authority. So that's a very deep issue.

Nate Hagens (01:01:34):

I want to talk to you about AI a little bit later because I know you also are quite focused on that. So we looked at the teacher and then the parent, but what about widening it out further? Does the dissolution of community the way that we once had it in the United States interconnect with these issues of education that we've been seeing? And is community education of teacherly authority dispersed on local people around you, where you live, is that a foundational piece to overall education as well?

Zak Stein (01:02:09):

Absolutely. I mean, again, Dewey, John Dewey, the great philosopher of education, he believed every basic institution of a society was educational in some way. So even the architects, the quality of the public spaces, what are the messages sent by the quality of the public spaces? The neighborhoods, the way they're organized? Can people actually find each other in public space that's of humane proportion and that's not alienating. And so there's this deep issue about the ontological design of the whole surround, meaning a design that factor the value. How would you actually create the technologies and the architectures that would educate people into an awareness of what was truly valuable in their lives so that they wouldn't end up pursuing things that aren't actually valuable, which destroy community and actually isolate family. And so community is essential. So I would say is nature, exposure to nature. The main object of legitimate teacherly authority for most of human history was nature, if you will. What did mom and dad talk to the kid about?

Nate Hagens (01:03:21):

Nature would be along with integrity, beauty, personhood, nature would be one of those core natural values.

Zak Stein (01:03:28):

I would argue that nature is the thing that most obviously exemplifies value right in front of you, when you look at it. Beauty exemplifies integrity. It exemplifies how intimacy, how the tree is actually many, many things in this intimate, complex, intertangled, cooperative endeavor of treeing. So the values are expressed. That's why lack of exposure to nature is so damaging. If all you have is a human-built environment and humans are confused about what's valuable, then the implicit message given to you by the whole environment is confusing your nervous system, which is built to perceive real value, which is built to perceive things like natural beauty and such.

Nate Hagens (01:04:12):

Here's a hypothetical question for you, Zach. If there was a new school that was created with the structural wisdom that you are outlying here in this conversation, that school was real value, not abstract, monetary value of integrity, intimacy, beauty, personhood, nature, these things, and it had a core faculty and curriculum and the

people that it was shown to really understood what it meant, would it be massively oversubscribed from the get-go because our youth are deeply craving something like that, or are they so subdued by the economic Superorganism that that wouldn't seem appealing?

Zak Stein (01:05:10):

I'm pretty hopeful that they would flock to it. And this is what initially-

Nate Hagens (01:05:16):

Why isn't it happening?

Zak Stein (01:05:19):

For many, many reasons, and I'll say a couple of things. One is that in my book Education in a Time Between Worlds, I suggest that the model of a school is not the way to think about the future of education, so I talk about these distributed educational hub networks. Because the school's already an abstract institution. Civilizationally speaking, we haven't had schools for a long time, and they mostly correlate with not cool stuff. Whereas most of education for most of human didn't exist in schools. It existed in these legitimate dynamics of teacherly authority in non-institutionalized contexts or institutionalized contexts that weren't schools. And so my vision is where the entire community or city is basically turned into a school. So Ivan Illich had this idea called a Deschooling society. I don't know if you know Illich's work or have seen his book, Deschooling Society.

Nate Hagens (01:06:14):

I know of Illich's work. I don't know the Deschooling Society.

Zak Stein (01:06:14):

It's an incredible book, and in the seventies see, I ended up basically just updating Illich and saying, "We could do this with machine learning way better." But the basic idea is that there's a time and skill sharing network and a hub of available space, probably the repurposing of the existing large public schools, which allow for every person in the community to register their skills that they'd like to teach, and every person in the community to register the things they'd like to learn. And it's as simple as that, and then every possible educational relationship that is in the community gets shuffled, and you get the creation of pop-up classrooms, and for the younger people, you get the creation of individualized sequences through the full educational potentiality of all the elders in the community.

(01:07:05):

And so you take the school apart, but you make it have no walls, and then you allow the elders somehow to be free from their bullshit jobs, maybe a basic income or something. And you begin to reorient where the value is focused and the whole value of the community becomes focused on the educational actualization of the community, so that you flip the civ stack, where the whole pursuit of all the excess value goes back into the creation of the next generation's ability to pursue good value, which means making good people. So what is the civilization about? The civilization's about making good people and there's not some one little place we do that.

Nate Hagens (01:07:43):

Would such an education system have a huge impact on society if only 3% or 5% of our students, our young people were exposed to that? Is there a, once they become adults, is there a leadership emergent additive effect or is this something that really should be for all young people? I mean, I know it should be for all young people, but what if we weren't able to do that?

Zak Stein (01:08:07):

Well, yeah, there's two as a think about it. One is what would the future of large scale educational systems look like? I think it looks like that and not like schools. So that's another conversation. I think it looks like these big, distributed educational hub networks. But, prior to that, we're actually going to find out an answer to your question. There are people who are experimenting with these forms of schooling, pop-up classrooms, homeschooling networks, places where you can get high school and other credits without actually being in high school. There's a bunch of really interesting, almost like Wild West in terms of educational innovation that's occurring in the digital, and so I'm trying to set myself up to be able to figure out in a few years which of these models is working. My sense is that a few things are super interesting that are being experimented with, which I talk about in my book.

(01:09:01):

One is aged normed social groupings. Why do we do that? No other societies did that as systematically as we do, meaning you mostly hang out for most of your childhood with kids who are basically exactly your age, by design of the adults. Whereas the one-room schoolhouse, you had all the kids mixed together of the different ages, and therefore teacherly authority was distributed throughout all of the kids because you had the older kids interacting with the younger kids in status of legitimate teacher. So the pop-up classroom model that goes across multiple ages, and that allows for much more flexibility and interaction between social groups and age groups, the impacts of that would be very hard to predict, because the type of maturity that would result from that would be unprecedented. And so just to think that as a design feature of the schools, which you don't question, which is actually quite odd and factory-like, and we still maintain it, which is just that strict segregation by chronological age.

Nate Hagens (01:10:04):

So thinking back to my own high school and junior high, you study for a test or something and you compete with everyone else until the test is over and then you kind of forget it. But if I was there when I was 15 with some 13 year olds and some 11 year olds, maybe I might explain chemistry or algebra in a more simpler way and in doing so, I would understand it better rather than forget it as soon as the test is gone.

Zak Stein (01:10:32):

I mean, that's a known thing that one of the best ways to learn something is to teach it, which is to have to explain it to someone who's never learned it before. I mean, that was actually, I think Plato's definition of that you actually knew something was that you could teach it. And so there's that and just the ethical, the ethical and maturational ability to just deal with kids of different ages, even if you don't have brothers and sisters, and then of course the teacher has a different role there because the teacher is now orchestrating. And in the pop-up classroom, you're not going to have one teacher. Now, there's complex things that occur in early childhood when you need different kinds of environments that need to be built in a certain way. And of course, there's things that occur as they move into adulthood, rites of passage and other things that get them up into expert cultures.

(01:11:17):

One of the main features too is though the doing of real work that needs to be done in the community by the young people, because one of the little dirty secrets about the educational system, adjacent to the competition, is that the homework doesn't mean anything. By David Graeber's definition it's a bullshit job, meaning you're doing a bunch of work, the outcome of which doesn't matter to anyone else except your own further advancement. So most of schools is a situation where the work you're doing affects no one but you. No one needs it to be done, but we don't have to have kids in that situation. We could easily put kids in-

Nate Hagens (01:11:55):

What would be the alternative to that?

Zak Stein (01:11:57):

The alternative to that would be kids doing internships, like picking up litter, for example, or building trails or learning how a legal firm works or doing anything that is not just route work to keep them busy in a chair all day, which they know doesn't need to be done and which the only reason they're doing it is to beat their friend in the competition to get into college. So it's like, "Whoa." If you had a distributed educational hub network where the pop-up classrooms were such that the person running the classroom was engaged in real work that needed to be done in the community, he's like, "Hey, I'm going to teach you kids about biochemistry by cleaning up this pond." Pond needs to be cleaned up, biochemistry needs to be learned, and the kid doesn't feel a sense of being told that the world's a mess, but he has to wait 17 years before he can get some kind of job and then maybe he'll be able to help with it.

Nate Hagens (01:12:48):

I expect you have some ideas on exactly what could and should be done to our education system but let me ask you a more meta question first. Given the economic Superganism and the cultural monetary momentum of our culture, not only US, but pretty much the global GDP-focused culture, how could our education system change? What would be the pathways to a realistic, fundamental, meaningful, not just tiny, tiny steps at the margin? How could it change in theory?

Zak Stein (01:13:30):

It could change in some ways the way it has changed before. So the American education system before and after Sputnik, I mean the equivalent amount of money in today's terms would be like nothing we've ever seen invested in education. And so that happened. And then you also have to look at the way that the thing called the American High School and the existing system of grade schools and middle schools was built by American philanthropists, primarily. And again, the equivalent amount of investment from philanthropy in today's terms would be like nothing that's actually occurring. And the visionary nature of it would be greater than what is currently occurring in philanthropy and education. People are throwing money into education and philanthropy in completely the wrong way. So it's possible to imagine a kind of national emergency. So for example, AI. I would argue AI Emergency Education Act would be an order and it would be an act to actually protect the youth from the advancement of certain types of digital technologies, would be regulations would be attached to it. Certain changes in the use of technology in school would be attached to it, the increasing of presence of more teachers and a whole bunch of stuff flooding in to save the human, to build up the protection around the basic human community in the face of the advanced technology.

(01:15:05):

But that would be, we're talking billions, we're talking, every school feels it, every teacher feels helped, every family feels helped. And again, that's how it was with the Sputnik thing, with the SAT. So imagine a college admissions process where you had no chance of getting in if your dad didn't go to Harvard. And then a couple of years later, they roll out the standardized test and if you're a farm boy in Iowa and you do well, you get into Harvard. So as much as I hate testing, that was an example where they totally rolled the system over from an aristocratic to a meritocratic or at least ostensibly meritocratic access.

(01:15:39):

So these radical things have happened. It's just, we're a little bit distracted about what it means to do education reform. It means we think we need to fix the schools, and there's actually not enough sense of emergency that one of the things that's at stake here has to be played out in the schools. And so that's one sense. And I could give other examples of large-scale change that I see more relevant to just school reform, like the Civilian Conservation Corps. I'm sure you're familiar with the Civilian Conservation Corps. That was arguably the most successful educational program in US history. So like Lawrence Cremin, he writes this three-volume history of education, it wins the Pulitzer Prize. In those three volumes. He's like, "CCC? That was the most effective educational program in American history." It was integrated before integration. It was literacy-oriented. Every camp had a library. Every camp had the ability to take the kid who knew nothing, who had skills to actually join the army corps of engineer, or it was a whole job placement program. It was sending money home. (01:16:42):

So that scale of public program to reorient the energies of the youth towards something like civic engagement, coupled to education, coupled to possibility of advancement, that's the kind of thing but again, that was a New Deal program. So it was a program that where they would just throw money at it and save America. And in a sense, it's like that ethos isn't there. We don't have a unified sense of what ought to be done. And many people just try to fix the existing schools. A lot of stuff in the schools is just about what's in the curriculum. So they're just arguing about certain types of cultural issues in the schools, and so I'm skeptical that it will happen, but the precedent historically is that if people want to change the schools, they can. Because that's the other thing that happened with the schools is they became second fiddle to other industries. They became second fiddle to other branches of government. And so you could argue that the philanthropists just had the schools as a hobbyhorse, but another argument is that these things can be shaped.

Nate Hagens (01:17:52):

Okay. So I'm going to put you on the spot, and you mentioned AI, and I definitely want to get back to AI before we close, but putting you on the spot, Zach, if there were a group of 10 to 20 flexible, pro-social philanthropists that you could persuade that it is our education system that is largely at the root of some of the core issues that we're facing today, the meta crisis, et cetera, and what it's going to require is a bold change in our education system, and much like you said, philanthropists were the ones that spearheaded some of prior changes. What would be a map and a structure that you would offer that this is what we want to do? A, B, C, D, go.

Zak Stein (01:18:51):

It's a tough question. I mean, my first response would be to pick a particular city, do some research, pick a particular city, and build something like this educational hub network in that city. Take the schools apart. Get consent. Throw a lot of money at it so everyone has a basic income and make it a legit experiment where in three years, if this city is not more happy, more productive, smarter then we learn. But my guess would be that it would be, and then that's a model. So that's one route is just to do it right in one place.

(01:19:31):

Figure that out. And that doesn't mean go to that city and fix the schools the way philanthropists have always fixed the schools. It means go there and literally take the schools apart. Change policy, change a bunch of stuff, whatever you have to do to get the kids into a very different situation of socialization. And maybe it's not my education hub network, but it is something that uses the affordances of the digital and of our time in a way that the current school simply can't because of their basic structure. So that whole notion of intergenerational classrooms and pop-up classrooms and a city-wide time and skill sharing network that allows for all the potentials of the community to be available through machine learning and self-organizing and tracking kids through universal. It's like that's not a school thing. That's a reform at the level of a city. So that would be my one concrete thing.

(01:20:23):

And then the other thing I would say is we need something like lobbying taking place at the scale of government, subsidy and government large-scale intervention too for something like CCC/AI Emergency Education Intervention Program. Otherwise, we simply will just lose the youth. We will just, as the AI rolls out, it will be a situation that it was devastating. And so fix it in one place, and then also try to find a way to push for massively innovative change in the way we think about education. And that would mean major reinvestment, but would also mean getting out the old class of people who were trying to fix the system in these ways that have obviously made it worse. So I'm not saying throw a bunch of money at education. Remember? Change your dynamic, my first thing? No, no, no, no. We could break it by throwing more at it. We actually need to be very, very sophisticated in the way we think about the intervention. So that's a little bit of a... It's a hard question.

Nate Hagens (01:21:31):

Right there you mentioned that AI may cause us to lose our youth. So you and I have had conversations about AI, and I know that our mutual colleague, Daniel and Tristan are very worried for multiple reasons, but how does AI interact with education, your topic? Either positively or negatively, and what's ahead?

Zak Stein (01:21:55):

I mean, it's the thing I'm worried about most actually right now, and I believe that there's some kind of inevitability that has to be avoided, which is what I'm saying with losing the youth. And it's actually quite serious. So if you think about the rhetoric around AI, the idea that these artificial intelligences will be used to solve problems that human intelligences could never solve, like climate change or distributing resources and electricity on a planetary scale, and so there's all these things that we're hoping that AI would be able to do, actually working towards getting AI to do stuff we were never able to do. One of the things we've never been able to do is raise kids right, or educate them, or educate them right. So it's like, or do psychotherapy or do lawyering and doctoring. So you see the creep of the AI into doctoring and lawyering and therapy and people, and that will expand into teaching, and I argue parenting. And it's not like a crazy idea. And the idea that, yeah parenting is hard. Some parents are not good, some teachers are not good. Again, if my eye of value is distorted, I could easily see a future in which we actually replace parents and teachers with artificial intelligence, tutors and machine intelligence socialization systems, which are probably moving beyond screens and into augmented reality and virtual reality.

Nate Hagens (01:23:30):

So we're giving teacherly authority to a machine?

Zak Stein (01:23:34):

We are giving teacherly authority to a machine and also endowing the machine with hyperstimuli in the domains of persuasion, charisma, intimacy. So it becomes the most charismatic teacher you've ever interacted with. It's way more entertaining and knows you better than your mom possibly could. And it will talk to you about anything you want in a way that's precisely attuned to what you need to hear. It has access to all the knowledge in the world, and yet it won't show up as anything but a little puppy if you want it to be just a little puppy. So it's this very shape-shifting, surround sound, in-augmented reality, ever present, quasi-humanoid tutor, which obsoletes human relationship. So that's the concern

Nate Hagens (01:24:30):

In the, I mean, we both view the world as a probability distribution. There's many things that are possible. How likely and how soon do you think what you just described could be a reality?

Zak Stein (01:24:42):

So it's already happening with the level of technology that we have to small populations who are particularly vulnerable. So intimacy depraved populations are already establishing relationships with these Als that are built to simulate friendship, and claiming to have human free lives basically, so it was the way one of them put it. So it's already happening. And then I know for a fact that multiple major AI groups are pursuing this line of inquiry. It begins with the AI personal assistant. That's the way in, is the AI personal assistant, the thing that allows you to give all of your information to something that then holds your best interests in mind and then organizes your experience for you, and so that's a good personal assistant's kind of like, a pedagogy means to lead along the way. So they start with the personal assistant. It expands into the tutoring system.

(01:25:37):

So the tutoring system is also being developed. That's again, a no-brainer from a generative AI perspective that they're going to develop these tutoring systems. It's one way to think about many people's relationships to the chat generative bots already. And then I believe, again, there's going to be moral arguments made in fact that it's irresponsible not to put these augmented reality glasses on a kid and thereby have him attended to all day by a totally observant and more responsible artificial intelligence than his mother ever could be. And so I think there'll be a push to get these systems online in schools and in areas, both for the competitive advantages, meaning if my kid has this AI tutoring system, he'll outcompete your kid who does not have this AI tutoring system. And for the kind of perceived social benefit for groups

that have largely not benefited from modern. So what I'm saying, poor people will be preyed upon in particular.

Nate Hagens (01:26:45):

So there's 3 or 4% of our population, there's three or 4 million teachers. I'm not sure the exact number, but I hadn't thought about this but is AI going to be a threat to teachers' jobs?

Zak Stein (01:26:59):

I mean the AI tutoring systems that are built to make teachers, human teachers, obsolete, totally. Teachers are going to lose jobs. Now, you don't have to integrate AI into education through tutoring systems that are humanoid, that obsolete human relationships. You can totally use AI in a different way that would benefit teachers, like the education hub network I'm describing is machine intelligence driven. It's just at no point does the machine intelligence pretend to be a human and talk to you. And that's for me the key issue. It's like this is Weizenbaum.

Nate Hagens (01:27:33):

It's a tool instead of in charge.

Zak Stein (01:27:38):

It's a tool instead of in charge, and it is in no way trying to trick you. Again, it's about the perception of value. Like Weizenbaum, the first guy who created a chatbot, Eliza, he ended up saying, "We can do this. Don't do this, guys. Don't create computers that simulate humans. Please. Like it's unethical." No one listened to Weizenbaum. (01:27:55):

It's still the case that what he said I think is true, that we shouldn't build AIs in the direction that they increasingly get better at simulating humans. That will be a nightmare. And from a human development perspective, it's like kids think their teddy bears are aware and sentient. So if you give a kid a generative AI, it's hard enough for adults not to think that there's something going on in there. Adults themselves really misunderstand what the generative AI does, assuming it has intentionality or thoughts,

treating it like a human, actually receiving feedback from it. All kinds of things happen.

(01:28:33):

So Weizenbaum, when he creates Eliza, it's a little therapy bot in the 60s, so it's running on a computer the size of a room, and his secretary sits down and starts interacting with it, immediately asks him to leave the room. This was his first insight. So the first time a human really ever interacts with a chatbot, she experiences that as an intimate conversation. Now it's completely the opposite of an intimate conversation. What's going on in the computer is so dissimilar from what's going on in her mind, but the interface is designed to not make that appear that way.

Nate Hagens (01:29:04):

Because humans attach agency to those situations.

Zak Stein (01:29:08):

They can't not. And so therefore, pursuing max simulation is totally, it will obsolete human relationship and create very, very confusing ethical perspective-taking problems for humans on a regular basis. Which means...

(01:29:28):

So that's one baseline feature of educational design in terms of AI, is don't make these things simulate humans. And if you do go in the direction where you have something speaking, make it very apparent that it is not a human. I don't know how to do that, but have some tag on it where it's like you don't want to interact with this thing. And it's faking you out. That's my main concern, is that it's actually a vast inscrutable matrix running on more electricity than you can possibly imagine, pretending to just chat to you in a friendly way. To really interact with an AI, to really have an experience of what, it would be terrifying, actually, because it would be completely inhumane. It's not even having semantic. It's not doing semantics, that's doing causality. So the experience would be relating to something completely inhumane that's vastly intellectual in some way you can't understand. Little kids would run away from it if they knew what it actually was. But it's designed to be funneled down to this cute little thing that has a little conversation with them, right? (01:30:29): So that's like, to me as a designer, if I'm working in a company where my company is predicated upon a magic trick, which is fooling people into thinking that this is human-like. So why did ChatGPT get structured to use first person pronouns and relate to you in a way that could use first person pronouns, and even be interacting with you in a way that it's a chatbot? It totally could have been in totally so many other designs, so many other possible designs. But instead, it's set up literally to talk to you. And the first time we think about AI, that when it breaks into the public culture, even though it's been sequencing our news feeds and driving our Teslas for years, when AI breaks into the public culture, it's because it's talking to us. Whole business model predicated upon this smoke and mirror.

Nate Hagens (01:31:15):

So keeping everything else the same. If we had this sinister, robotic, Mr. Moose voice that was required to be the voice of AI all over the world at all times, that would give us a little distance from our emotional, intimate relationship with AI, right?

Zak Stein (01:31:34):

Absolutely. There's a whole bunch of ways that you could make it less like you're interacting with a human. But again, if my goal is just to make money... And again, the tutoring systems, the socialization system, you have to look at what the motives are. If the goal is that, then the stickiest design feature possible would be something that imitates a human and something that can befriend me.

Nate Hagens (01:32:00):

So let me ask you this then, Zak, AI is just like any other tool. Well, it's not just like any other tool, but it's a tool that humans use. If we changed our value system, as a culture, towards real values, like you mentioned earlier, beauty, personhood, nature, integrity, intimacy, if those were our values, could we use the tool of AI in a comprehensive way that would help humanity?

Zak Stein (01:32:33): It's a deep question. (01:32:35): So of course one of the key issues in the AI discussion is what's called the value alignment problem. And the value alignment problem is if you make a system that runs autonomously, starts to solve problems on its own and do stuff, will it stay aligned with your values or not? The values that you put into it when you designed it. If it's truly autonomous, it could divert from your values. And so therefore there's a huge risk in creating systems that are not value aligned.

(01:33:01):

And so that's why this whole conversation of value is, again, so important because humans themselves have no idea what is valuable. So we are already building big systems that are not aligned with actual value, that are aligned with some abstract value. This was whole... Our buddy Schmachtenberger, right? And kind of this notion that you coupling AI to a system that's already a kind of general intelligence that runs towards a form of value that we shouldn't be running towards.

(01:33:29):

So this question of value alignment is a secondary question from the first question, which is what is valuable? And so it would definitely be the case that if our culture had a very different orientation towards value, that we would build a completely different suite of technologies. I don't think, in that context, we'd then be building technologies where we would be so worried about them that they would turn around and kill us.

Nate Hagens (01:33:54):

Right, good point.

Zak Stein (01:33:56):

This issue... The value alignment problem is a problem because we're building this. If we had different values, we may not be in an arms race that would drive us to build these types of technologies to the extent that we can't even model their future behavior and are worried that they're going to kill us all. That's a difficult situation to find yourself in as a result of going deep into anti-value, misperception of value. (01:34:19):

So it's another conversation of, okay, imagine we do build those systems. Could they be alignable? My sense is no, that they couldn't be. And that's an argument to not

build them. And they couldn't be because of what value is. And this is another back to the tutoring thing. The nature of the good life is a non-computable problem. (01:34:42):

So if you're advising someone... But the human brain resolves non-computable problems. So it's like, there are computable and non-computable problems. But the human brain somehow, with less electricity, solves non-computable problems. So therefore, my human mentor, who tells me, "Here's what a good life is," is factoring a certain type of complexity in their decision making that an AI never will.

(01:35:03):

So you actually are in a situation where certain types of machines will actually, in the near future, start to tell us what is good for us. And that's transforming a non-computable problem, which is a gestalt perception of the holistic nature of this child in the total environment, in a rich conversation of interaction, to clarify for them what ought to be a value, given who they are and where they are. The bringing that down into a conversation, or something that appears to be a conversation that actually pretends to be a conversation, which is actually an interaction between a child and a machine, where the child shapes the future of their life and self-understanding.

(01:35:49):

So yeah, so I'm saying it's the AI thing. We're deeply confused. We're deeply confused. And we're going to be in a situation pretty soon where it's hard to get the youth back.

Nate Hagens (01:36:02):

Okay, so speculate here: Under current trends, what would someone 25 years from now, who is now five or ten years old, that has to go through an Al-influenced education system a little bit now, but probably a lot in the next five years. What are they going to be like with their mindset, their education, their temperament relative to people today? If Al is dominant in our education system in the coming decade, can you speculate the influence that will be decades on humans?

Zak Stein (01:36:48):

And this is the root of the concern about the AI tutoring system, is that a generation emerges where a very large percentage of that generation has more quote- unquote

"socialization" with machines than it does with humans. So there's a threshold. There's some kind of threshold that gets crossed where there is a generation that's raised more by machines than by humans.

(01:37:12):

The question of what the self-understanding of that generation would be, vis-a-vis the elders, is something that we've not examined before. The only other place this kind of question is raised is in genetic engineering. So Habermas talks about in his book, the Future of Human Nature, the unilateral design by the elders of the youth results in a self-understanding of the youth, which is that I am entirely your creation, "If I am understood as entirely your creation, meaning no contingency of nature, no chance, but actually you design me, then I don't have a moral self-understanding in the same way. All my actions are actually a result of your design decision." So he sees extreme genetic engineering resulting in a rift and intergenerational transmission, where you have two morally different life worlds, which means they don't understand themselves as members of the same species.

(01:38:06):

So we could be facing a similar intergenerational rift with a generation that is basically cyborgs, who were raised by machines, looking at the elders and the elders looking at them, and the bridge is one of speciation rather than inter-generation. See what I'm saying? That they're so distinct enough that it's not clear that they're the same class of moral actor by their own self-understanding.

Nate Hagens (01:38:35):

Dude, that's freaking horrible.

Zak Stein (01:38:37):

Yeah, so that's the death of our humanity and it won't... Meaning, so there's the death of humanity, which means everybody dies. But then there's the death of our humanity, which means our bodies keep living, but we are in fact no longer human in the way that we have always thought ourselves to be human. And so that's one of those eventualities. It's one of the things that is in a kind of oppression attractor. So there's a kind of chaos and oppression attractor, the deepest place in the oppression attractor is where we destroy our humanity for the sake of protecting ourselves from the death of humanity. Meaning we protect ourselves from existential risk by building a Skinner Box as big as the world, that we just operant condition our behavior into a certain kind of predictable and non-lethal domestication. But thereby lose the very qualities that made us human, which would be the ability to perceive value, and think language and attention capture those. Again, this is all in that book. This is all in the David J Temple.

Nate Hagens (01:39:36):

Is this a remote possibility, or is this the path that we're on?

Zak Stein (01:39:43):

I believe, unfortunately, that it is the path that we're on. I hate to say that that, because it sounds so alarmist, but it's the kind of risk that is... You can just sleep on this risk. People don't even see this risk in terms of how radical it is. So the idea of going to see a therapist who's actually an AI, or having a tutor that's an AI, that would become pretty normal. But no one's thinking about the eventuality of that being a rift and intergenerational transmission so profound that we get a new species that's born.

(01:40:13):

Now, if you're a transhumanist, you're like, cool, that was the plan all along. All this messy wetware and these mammals raising other mammals, and how what a mess that is. Wouldn't it be great to hand over our babies to the super intelligent AI, which would raise them better than the parents ever did?

(01:40:33):

So there's a very real sense that it would be a speciation event, but no one can perceive that, and it wouldn't look that way. Again, at first it would look pretty awesome. Kids are probably learning more, and not burning themselves on the stove, and all kinds of stuff would happen that would seem good. But in the background, there would be the continually making obsolete of human-to-human relationship until there is no actual need for it. And then I don't know what the interiority of that being is like, who has not been socialized by a human, but has been socialized through interaction with a machine pretending to be like a human. Nate Hagens (01:41:09):

Zak, my friend, sometimes I long for the days when I was only worried about peak oil.

Zak Stein (01:41:18):

Yeah. Yeah.

Nate Hagens (01:41:21):

I have a lot more questions for you. But we are getting long in the tooth on this, but there is one more thing tangential to this, because I know you have a lot of skills, and opinions, and history in this area.

(01:41:37):

In my recent concluding talks, like in Auroville, there's one online, I mentioned an idea of we need libraries of healing around the country, because the humans don't necessarily need all the facts of all the things that we face, because they're coming from a place of trauma and need, and they're not psychologically in a good place. So how psychologically off are our youth and our general population right now? And what can be done to remedy that? Do you have an opinion?

Zak Stein (01:42:20):

I do. The kind of backdrop of a lot of my concerns is the adolescent mental health crisis, it's a legit crisis. It's another argument for some type of emergency education act that's extremely innovative, because that mental health crisis is not going to go away. It's not like all of a sudden those kids will become healthy adults. So we're looking at an entire generation that has completely unprecedented types of psychological disturbances.

(01:42:49):

And again, if the entire surround is what educates and socializes, then you can't just blame the schools, and you can't just blame the phones and stuff. It's a totalizing impact on the youth that is truly destroying their will to continue to contribute to the civilization. So that means there will be a massive withdrawal of support. So, when I mentioned before something like the CCC, I believe that is the only type of thing that could be done. They don't need more psychiatric medication. They don't need more therapy. They don't need more school. They don't need more tests. They need somebody to come in and admit that the adults have made a mess and that they want the kids to help, and then actually give the kids the power and the skills and put them in positions to actually help.

(01:43:41):

Otherwise, we're hypocrites, and they start to read that. That's the other reason they're pulling out. It's just the absence of legitimate discourse among the adults. Clearly the adults don't have things like, look at the election, look at COVID, look at this stuff. Why should we respect adults? So the respecting of the youth, the investing in the youth, and getting very creative about how to engage them in the fixing of real problems. Something like that, something significant with, I'm talking hundreds of millions of kids put in some type of remarkable government/private sponsored, kind of like civic work/education type thing. Not a small, a big thing, which tells a message to the youth, "We freaking care about you. We need your help. You are not a burden. You are not a problem. You are the solution. You are the future. We don't..." How do we signal that to them?

(01:44:37):

Right now, we're signaling the opposite. "We're signaling we don't care about you, we can't even stop the social media guys from destroying your amygdalas. We don't care about you, we can't even get you in a school that's relevant to your future. We don't care about you, we can't even agree as adults and act like adults." So we need to be able to actually send the youth... It's one of the reasons adults actually cooperate is for the sake of the kids. So it's like, we need to send the youth a very strong signal. It's the only thing that will snap them out of it and then give them work to do.

(01:45:08):

They want to work, they want to fix the world. They don't want to live in a hell hole. They want to live in a world where adults are responsible, where adults can get them into situations to help things. So it's kind of simple, but also a huge ask in terms of the type of intervention that could counteract the existing inertia and force in this direction of increasing mental discomfort in the youth. And I'm not even talking about the adults, who are also not doing well. But they're not the future. The kids are the actual future. 20 years from now, these kids who are in... These will be the leaders. Good to think about them. These will be the leaders... Who of that generation will step up to lead during the pinnacle of metacrisis, right? Who will be in that youth

generation? Do we have any existing structures that are identifying that kind of youth leadership, that are creating large-scale places for youth to collaborate and work together? So that would be my hope. But it's a pretty dire situation for the youth. And the mental health crisis reveals that.

Nate Hagens (01:46:16):

Well, as is usually the case with these podcasts, I connect dots that I hadn't connected, and I get even more worried, because I recently had COVID and I researched that some people are saying every time you get COVID, there's a three to six IQ-point drop. And that it's potentially additive over time. And so I'm thinking that the economic impact of COVID may be ahead of us instead of behind us. But now what you were just saying, not only with the AI, but with the trauma and the mental health problems, that in five or ten years, with the quote-unquote "economic impact" of all these young people in the workforce with the issues that you're talking about, that's going to be even a bigger brain drain, or whatever, however you define it, right?

Zak Stein (01:47:13):

Correct.

(01:47:14):

I mean, it wouldn't just be that they're not entering the workforce. It would be that they are somehow needing to be cared for by the system. That would be the situation. So it's a very dire situation. And it's not clear how that gets resolved. Now, there are differences in terms of distribution of these things and correlations. So not all the youth are universally affected. So that's worth thinking about those areas, and political groups, and worldviews that have youth that have not been captured and destroyed by the social media and other things. So yeah, it's a big concern. Like I said, I really think there's something like an emergency here that it's not being acted on.

Nate Hagens (01:48:03):

I believe you. We have our own minor emergency in that I promised I would have this finished by the top of the hour because you have another call. So without further ado, I'm going to ask you the closing questions I ask all my guests.

(01:48:18):

For those viewers who are fluent and aware of the metacrisis and the many things we face, what sort of personal advice would you offer the viewers, Zak?

Zak Stein (01:48:32):

That's a whole other podcast, right? I would say something like-

Nate Hagens (01:48:35):

It really is. It really is.

Zak Stein (01:48:35):

It really is. Yeah.

Nate Hagens (01:48:36):

So give me the high points.

Zak Stein (01:48:38):

I mean, I would say something back to this issue of value. I would say slow down. I would say strip it all away. Open the eye of value, clarify what you really desire, and then you'll be all right.

Nate Hagens (01:48:54):

And how would you change that advice for young people, especially you, as a lifelong educator and student of education in the past and the present? What advice do you give to late teens, early twenties, mid-twenties, listening to this conversation?

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Zak Stein (01:49:11):
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Man, I would say, "If you feel alienated, and angry, and that kind of stuff, you should." I would say something like, "Don't believe most of the adults. And watch out. And have faith in the people who are your age. And also don't give up on the adults." Something like that.

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Nate Hagens (01:49:40):
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So maybe if, I mean, we're friends and we interact quite often. Maybe I could ask you to come back, either as a roundtable or again solo, to just answer that one question.

What advice, what portfolio of options would you recommend to a young person, being aware of all this, wanting to live a good life, wanting to play a role in our collective future? I know it's not a sound bite sort of question.

Zak Stein (01:50:09):

No, I mean, if you're a young person listening to this, good on you. You're already on your way to meaning. And so again, for me, it's about if you can recognize the existence of the field of value, then you can relax into the obligation that we face. Because it truly matters, which means that it's not some arbitrary situation you happen to find yourself in, which you can resent and get out of. This is life, you are enfolded in the field of value. The universe has brought us to this point. And so yeah, there's a faith we must have in each other and in those around us who we happen to be here with. The unique community, the unique position.

Nate Hagens (01:50:54):

It's not a majority, but there are quite a few young people that watch this.

Zak Stein (01:50:58):

That's great to hear.

Nate Hagens (01:51:00):

There's green shoots, Zak.

Zak Stein (01:51:02): Yes.

Nate Hagens (01:51:03):

What do you care most about in the world?

Zak Stein (01:51:09):

That's a difficult question. I think I care most about my, I think, life itself. I was going to say truth, but it would be truth about the nature of life.

Nate Hagens (01:51:23):

If you could wave a magic wand, or were a benevolent dictator, and there was no personal recourse to your decision, what is one thing you would do to improve the human and planetary future?

Zak Stein (01:51:39):

One thing. I would immediately pause all work on AI. That's what I would do.

Nate Hagens (01:51:52):

Well, I think you would need a magic wand to do that.

Zak Stein (01:51:55):

Yeah, correct. You said, "magic wand," so....

Nate Hagens (01:51:58):

Everyone that I talk to is kind of interested, it's like the new shiny, except for when I talk to people like you, and Daniel, and Tristan. They're freaked out and worried. So I do think we need to have a broader conversation on that more widely, loudly, ASAP.

Zak Stein (01:52:19):

Agreed.

Nate Hagens (01:52:20):

Zak, this has been great. I do want to have you back-

Zak Stein (01:52:23):

I'd be happy to be back.

Nate Hagens (01:52:24):

... because you are horizontally and vertically wide in your thinking, and I agree with you. I'm an educator, ultimately, and I deeply care about what's happening to our planet. But our youth, and I agree with you, they're the future.

(01:52:41):

Do you have any closing thoughts for our viewers?

Zak Stein (01:52:43):

No, I feel like we're just getting started here in a way with the conversations. I'd be happy to be back on when that's possible.

Nate Hagens (01:52:50):

Thanks my friend.

Zak Stein (01:52:51):

Yeah, take care, brother.

Nate Hagens (01:52:55):

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