The Great Simplification

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[00:00:00] **Zak Stein:** We are very systematically betraying the youth. My sense is that the people who love kids and interact with kids all day and are worried about kids, would be worried about this. If they give personhood to chatbots, it's gonna open up a world of pain and a world of insanity, and they're doing it not 'cause they believe actually that they're personhood.

[00:00:19] They're doing it primarily to protect their corporate interests, to continue to distribute this incredibly popular, deceptive technology.

[00:00:32] **Nate Hagens:** Today I'm rejoined by Zak Stein, who is a leading authority on the future of education and human development. we take a deep dive on the risks that artificial intelligence is increasingly presenting for the education of today's youth. Zak Stein is the co-founder of the Civilization Research Institute, as well as the Consillience project.

[00:00:55] Zak received his doctorate from Harvard University and has been trained at the interface of philosophy, psychology, and education, and now works in fields related to the mitigation of global catastrophic risk. Zak is also the co-founder of the Center for World Philosophy and Religion. In addition, Zak is the author of dozens of published papers and two books, including.

[00:01:19] Education in a time between worlds. This conversation sheds light on a largely overlooked and increasingly insidious risk that artificial intelligence poses to our society. The integration of technology and the upbringing of our youth has become the standard in many countries with minimal thought to the long-term consequences for young people's wellbeing and that of society at large.

[00:01:46] Zak's work centers on how AI amplifies these risks, as well as ways that we can predict and adapt to this new technological reality. Before we begin, if you enjoy this podcast, one of the biggest ways you can support us is by subscribing to it on your favorite platform, as well as sharing this episode with someone who might also enjoy it.

[00:02:08] This podcast, as you know, is not for everyone, but it is for some people who are curious and pro-social and wanna learn about our global situation. we believe in making this content free and accessible to as many people as possible. So we appreciate your support With that, please welcome Zak Stein, welcome back to the program.

[00:02:31] It's great to be here. Nate, good to see you. last year, I believe it was on your first appearance on this show. you joined me to discuss the broad future of education. Including what education is for, the standardization of the learning process and the role of technology in shaping young human minds.

[00:02:54] And today, I have invited you back, because of what's happening in our world, what's happening in the news, to take a deep dive on, that latter topic specifically, in regards to ai, artificial intelligence. So there's been a lot of discussion in the news, about the risks of AI also on this channel.

[00:03:18] but you've been specifically focused in your work on the interplay between artificial intelligence and education. So that's what I want to take a deep dive with you on today. Why is it important to take a microscope to the specific relationship between AI and education when we think about shaping better human futures than the default?

[00:03:41] Yeah, so I mean, it's,

[00:03:42] **Zak Stein:** worth looking at. Technology and education in general like that is actually I think something we discussed last time I was here and it's, so this question of AI and education is pressing important, timely, but technology and education has actually been since time immemorial. The thing that has restructured our brains and nervous systems and relationships was just this deep relationship between the intergenerational transmission, meaning just like elders and youth teaching, working together to give the youth the skills they need to recreate and innovate the social.

[00:04:22] Kind of world as it were. That's been happening forever. Technology has at certain points intervene radically. So one of them was the printing press, the intervention of the printing press into, you know, multi millennia long, not like

intergenerational process that didn't involve literacy. All of a sudden now the vast majority do, right?

[00:04:45] So the printing press changes everything. Then you get electricity, right? Electricity gives you radio, television, huge deal. Then you get digital. and so far digital has kind of been just radio and television on steroids, YouTube, podcasts, other things, which are really just the electrical paradigm now with like a million, billion channels and.

[00:05:11] What then started to happen was the curation process of the algorithm. So this was the first wave of ai. And when I wrote my second book Education in a Time Between Worlds, it was in that context, it was in the context of the ascendancy of social media. and it was at that point that I saw that actually you could use technology to run interference between the teacher and the student.

[00:05:35] You could isolate kids in front of class, you know, in front of computers rather than having them interact with each other. and I saw a future, which was then confirmed with the way the COVID pandemic unfolded, which was the inability to integrate the digital into educational systems that were under extreme pressure and the default position being one of isolating the students in front of their screens basically.

[00:06:05] So I started to think of this philosophy of the. Philosophy of educational technology, which suggests that any technology, but especially digital, should be one that scaffolds human to human interaction rather than creates fewer opportunities for human to human interaction or supplants, human to human interaction.

[00:06:25] And so typing and arguing on social media isn't by this definition human interaction. it's a certain type of transactional process. Human interaction is embodied in person, long form joint detention, which means us together in a room thinking about something or working on something together. So back in 2019, I suggested we could take apart the large educational systems as they exist and put together these distributed educational hubs, these distributed educational networks where the backend is artificial intelligence.

[00:07:01] The backend is actually a vast. City scale time and skill sharing network, meaning you know how to play piano, you'd be willing to teach it. This kid would like to learn piano. He'd be willing to learn it, right? You do that for everyone who's interested in the entire city and you allow for machine intelligence to orchestrate the self-organized educational configurations of the city that are kind of trying to happen.

[00:07:30] **Nate Hagens:** So, so you advocated for that back in 2019?

[00:07:33] **Zak Stein:** I did and basically said like, if we don't do this, we're gonna end up just creating with digital technology tutors and screen-based. Educational modalities that isolate students from each other and from teachers and from the world, rather than using the digital to actually free us from modern education, which was a huge problem and do what Ivan ILI suggested, which was this process of kind of deschooling the ces, deschooling the society back into a distributed responsibility for education and intergenerational transmission tied into the needs of the community enabled at scale only by something like a machine intelligence that can actually register the millions of different possible pop-up classrooms that could be configured in a city at any moment and figure out who actually is available and then provide curriculum support and other things now rather than.

[00:08:27] This incredible technology replacing the function of teaching, replacing the function of parenting, it would scaffold it. So this is me saying like there are visions for real educational change and opportunity using advanced technologies. Then there are other futures where the advanced technologies actually disrupt intergenerational transmission so profoundly that we run grave, grave risks.

[00:08:55] And this would be basically, what's happening now. Yeah. AI enabled socialization where a new study showed that something like, you know, 70 or 80% of the users to this one deep anthropomorphic AI chat service from Gen Z said they would marry their chat bot. If that was legally possible. So this is of course industry study, kind of sensationally like industry study reported in Forbes.

[00:09:22] So Forbes reports it, and they're basically saying the heavy users of our product, attribute to it personhood and love, and would get into a marriage relationship with it over like an actual human now. So that's industry research

reporting that now for them, that's like, like something that you would offer to the venture capitalists as evidence that your product is sticky and working.

[00:09:47] and from my perspective as an educator, this is a catastrophe. and so the question is how do you explain the difference? And there's actually legal cases occurring now that are relevant to this and a whole bunch of stuff. And so that's the first thing in is that we haven't taken the path with the digital technologies, that we could have.

[00:10:06] And we've taken a path instead where we're moving towards this AI enabled socialization through deep anthropomorphization. and that means basically technology's designed to trick you into thinking that there are people in form transparent relationships with them.

[00:10:23] **Nate Hagens:** Okay, well, we're friends and you're friends with Daniel, so you know that I have the propensity to interrupt and get curious.

[00:10:33] 'cause just on your opening statement, I have like 10 questions. Perfect. So, first of all, There was not the risk historically when there was intergenerational wealth, not wealth transfer, educational dissemination to the next generation, that next generation would not lose their humanity because it was human to human.

[00:10:58] response. One of the fears of AI that I was unaware of a year ago and now see it as plausible, is it's gonna be like Facebook and the other social media things on steroids with respect to its addiction, and the dehumanization of the people who use it. Because in the same way as you use, MapQuest or Google Maps, you lose your somewhat sense of natural direction.

[00:11:25] If you're asking AI everything, you lose your ability to think for yourself and, have, I mean you tell me, the cognitive, decay when you're outsourcing so much of your thought process to. A large language model. So is there the risk of a, losing our cognitive abilities as students, as young people and b kind of losing your humanity of sorts?

[00:11:53] Yeah, both of those risks.

[00:11:55] **Zak Stein:** And, it's funny 'cause I, you know, a lot of what I'm saying here is just a result of conversations I've had with actual people like, and who have been my teachers, right? So going back to Kurt Fisher, who knew some of the first people to build chatbots back in the sixties and seventies, and, he warned me of this problem actually when he was my teacher.

[00:12:16] Then I've talked with to Mark Gaffney at length, Ken Wilber Lang. I've talked to AI specialists, Dan, there's a whole bunch of people. and so the point I'm making here is that conversation is everything. It's everything. That's why podcast. Like conversation is fundamental to life. And so the supplanting of that, and actually the euphemistic use of the word conversational agent or chatbot, meaning that you're saying it's a chat, but actually chats are things that by definition occur between people.

[00:12:48] So you've euphemistically frame the whole thing, as a conversation when actually embodied human to human conversation is the lifeblood of socialization and education and growth of ideas and a whole bunch of things. so there's a depth of what's being captured here, similar to the depth of what was captured in the first wave of ai, except that was kind of our attention here.

[00:13:15] They've gone through attention to capture the core of what we're actually attending to, which is each other.

[00:13:19] **Nate Hagens:** So I've been recently quite interested in attention. I did last week's frankly on it. And I think, like you just said, if you combine attention with. Humanity when you get conversation and conversation is the, utmost of unexpected reward, like the dopamine of a slot machine, especially if it's someone who's intelligent and wise and interesting and shares your values, like you and I, we, I mean, we have the camera on right now, but if we're, I don't know where you're gonna go.

[00:13:51] you don't know what I'm gonna ask you. And it's one of the pure human treasures to be fully present in a conversation with another human. Now I have to say, I've had that same feeling with, Claude or chat GPT when I'm asking them about ecology or, you know, a philosophical discussion, knowing at some level in my brain that this is a machine I'm talking to.

[00:14:14] Not a flesh and blood human.

[00:14:16] **Zak Stein:** Yep. Totally. So many things I say this is core to the work that's like done by David J Temple, over at the Center for World Philosophy and Religion. So this would be myself, Gaffney Wilbur, and this book coming out, exit the Silicon Maze. Be followed by a book specifically on attention.

[00:14:33] And you're right to see conversation as the lifeblood and actually to see it as a broader process that includes the human. So this is where it gets complicated, right? So you can perceive a lot of what occurs in the whole cosmos as conversation. which is to say like instead of strong computational, which construes the universe as like computational transformation of information, you can understand the universe still is information.

[00:15:02] But as conversation, and this is actually deep, kind of like esoteric religious lineage of what's like a mysticism, which is. The structure of language and the structure of conversation and what's, modeled in conversation, which is this exchanges of interiors and actually the creating of something larger than just us.

[00:15:23] The conversation lives beyond us, so the notion of the many coming into the one and creating something greater is a ubiquitous evolutionary process happens everywhere. Self-organization

[00:15:33] **Nate Hagens:** process, the many coming into the one and becoming something greater.

[00:15:38] **Zak Stein:** Yeah, this is a white heian frame, but it's also like onic theory and other things, which is just a basic process in almost any self-organization process or evolutionary processes where you have a bunch of disparate elements, months, and then they come together at a higher order to create something that.

[00:15:56] Couldn't exist without their participation, but couldn't be created by any individual.

[00:16:00] **Nate Hagens:** So this is, emergence

[00:16:02] **Zak Stein:** in ecology or, something like it emerge. So in the human context, so much of what is emergent here is our conversation. Like the reason you enjoy a conversation is precisely because you don't know where it's going.

[00:16:13] if we were reading a script and the people listening knew we were reading a script, it would not be as interesting as the fact that we have no idea where we're going actually in the conversation. And the other dimension of conversation is there's appropriateness and inappropriateness. You're kind of feeling out where we're going.

[00:16:28] There's a, what's called a normativity, which means like a, you can break of a, you can violate the rules of a conversation. And so that's interesting. So the other thing that makes the chat bot different is that it's not participating in the rules of conversation, meaning it's actually not accountable for what it says.

[00:16:44] Like if I were to say something to you that was a lie right now. That matters for our friendship. For example, if I, claim to do something for you in the future, make a promise. For example, this is called speech act theory. So there's a, way to think about what is language. A language, just conveyance of information.

[00:17:05] Actually no language is action and they cannot take speech

[00:17:09] **Nate Hagens:** acts. I just had another idea. Good. So our culture. Partially, I believe because of the large s from the carbon pulse, we have this accordion of wealth that ends up having people seek and strive for approval and status more than our ancestral past when that accordion was smaller.

[00:17:32] So we go through life, not all of us, but we go through life trying to seek approval and, we stockpile likes. And social media hits like so many souvenirs. And when you're engaged with a tutor or a chat GPT or something, they almost always give you positive feedback. It's like a friend that doesn't, that doesn't criticize you.

[00:17:56] So it, it's like the, it's kind of like a, like on cocaine because you're You're combining the conversation and the approval with a machine.

[00:18:05] **Zak Stein:** Yeah.

[00:18:06] **Nate Hagens:** And it's so, it's

[00:18:06] **Zak Stein:** psycho fantic to a de to like a fault, which means it's always gonna flatter you. But again, even if it's a chat bot designed to be a therapy bot or a tutor bot, which let's say has built in psychometric controls to monitor neurosis and see where you're learning at a bunch of stuff.

[00:18:24] Like if you, even if you did that, it's still not a person. And so many of the things that make a conversation, which is that you can be accountable for what you say in a conversation later, not semantically accountable, but embodied action accountable. So the way you actually learn language.

[00:18:42] So this is where it gets really complicated. Imagine a kid growing up with a anthropomorphic domestic robot that has better, better define that for a second. So basically like, it's like a movie, right? A kid's growing up with a robot nanny that, you know, it looks like a robot, but it's got eyes and it can do kind of emotive expressions,

[00:19:01] **Nate Hagens:** okay?

[00:19:01] **Zak Stein:** And it can give you whatever voice works when it's talking to you. so the physical presence in the house of a robot, there's also the possibility of augmented reality. Projection of humanoid form, meaning like a tutor that lives in your augmented reality. I'm imagining actually domestic robotics like Elon Musk see this as a multi-billion dollar industry where every house has a robot domestic worker, ostensibly.

[00:19:27] And that thing would be by default also, nanny slash babysitter, keeping kid safe,

[00:19:33] **Nate Hagens:** interacting with kid. Setting aside the, the affordability and inequality and the fact that we're in, financial overshoot setting that aside for the moment. How far away are we from such a, an outcome,

[00:19:49] **Zak Stein:** year, two years.

[00:19:50] At the high as a high-end commodity, I believe, it probably already exists, depending where you go, the ability to embed then a large language model within the domestic robot, which moves it from, so it's worth knowing. It's hard to make a domestic robot. So like the classic test, I forget who came up with, I think it was W Hack, was like the coffee test, which means can the robot enter a house it does not know and make coffee.

[00:20:14] It's actually hard. Like most little kids couldn't do that, right? So it's a complex task. and then can it, give care to a human without dehumanizing becomes a deeper, than the Turing test. Deeper than the Turing test is the, ability of the robot to administer care, let's say, to it, to comfort a child.

[00:20:31] when it begins to do that, then the child forms an attachment relationship to it. Now we are in uncharted territory where the language acquisition process is the result of the fear of social sanction. An attachment relationship with a machine where usually you say what you're supposed to say because you're, 'cause you make mom upset if you said a swear or if you said illogical things or if you said something and then didn't do it.

[00:20:54] Mom gets upset. Now, who gets upset? A commodity owned by a corporation that is put in your house that now has the ability to comfort your child better than you can. And again, this to me, I'm instinctually a little repulsed by this, well, actually a lot repulsed by this. But for many people, these are their design ambitions.

[00:21:14] and so this, I think I'm just, I'm all here and sense, just like show this as a possible future and say, do we want this future? Right now it's happening. and. I think we don't, I think at the very, I'm not gonna get into what we should do, but I'm just kind of painting this, the, supplanting of human to human socialization with, machine-based socialization.

[00:21:39] **Nate Hagens:** I'm having a deja vu and not in a good way. you might think that I listen to podcasts. I don't have time. I don't even listen to my podcast. The only one I've ever listened to is, Ian McGilchrist and one of Daniels to prepare for the next one. And now I'm getting the deja vu that I felt quite sick to my stomach in our first podcast.

[00:22:01] When you were mentioning some of these things, 'cause I'm getting that same feeling. So let me ask an, advanced question. well, let me before I do that, so there's the, the concept of supernormal stimuli and they tested that, The stimuli in a baby, a mother bird, evolutionary trajectory is not all of your babies survive.

[00:22:30] So preferentially feed the one that is biggest. And so if you put a popsicle stick in a bird nest that is bigger and redder than the actual baby bird, the mom will drop worms at this Popsicle stick. And to me, it these humanoid robots with all the other things that approval and immediate answers and care, and the ideal parenting protocol from Dan Brown or whatever, they're gonna do it.

[00:22:57] So it's almost like this is a, higher super normal stimuli than, the United States dollar or, Nintendo. I mean,

[00:23:10] **Zak Stein:** the most interesting things in almost any environment for 90% of people are people. Right, right. Mom. Mom is the most interesting thing. Dad is the most interesting thing, sister, you know, then maybe dog or something, but it's always an anate thing.

[00:23:26] if you have a stuffed animal that's important to you, you attribute to it, interiority. So this is the transitional object that's very important that some of the regulations I'm suggesting on age limits for interaction with deep anthropomorphic technology would have to do with both when attachments are formed and when anthropomorphism is used.

[00:23:48] By kids psychologically, appropriately, as an aspect of these transitional objects where you, know, you literally talk to and protect your stuffed animal in a way you would as if it was sentient. So to throw an actual art, like an, AI into that context to be, is just very irresponsible. just flat out, regardless of any of the metaphysical, debates about personhood and all that stuff, it's

[00:24:10] **Nate Hagens:** just like.

[00:24:11] So since you were on last, Jonathan Het has been, beating the drum on this. There was some research that came out, and I'm not up to date on the particulars, but it showed that in the last 15 years, the cognitive abilities of students

around the world, young people have declined. And the, the culprit is likely screen time and social media and, all that.

[00:24:33] So if we already know that, and there does seem to be an awareness now with parents and even young people, I think we've hit peak social media because there is a little bit of a red pill, blue pill sort of, I want to take the better, healthier path and I'm not gonna put my kid on a, an iPad when she's 13.

[00:24:55] So there is that awareness. Won't that, be, a applied to AI as well.

[00:25:03] **Zak Stein:** This is actually where I've started to get quite concerned because. You know, we, both know Tristan, Tristan raised the alarm, like the social dilemma, the Center for Humane Technology, the what I call the first wave of ai. but the thing is, we never really did anything about it.

[00:25:19] Like we didn't do anything about it to be like, in terms of regulations, in terms of the amounts of screen time going down. Like people are aware, but we actually didn't, for example, put strict age limits on, or do those types of things. We got negative sense and we know it's bad and it's like we're trying to get off it like it's McDonald's or something.

[00:25:40] Right? Whereas I've seen graduate schools of education, and I was just at my alma mater, basically really, be receptive to the second wave of ai. Like really embrace, in a way that is incomprehensible to me, given the known effects of the first wave of ai. which as you mentioned, have been devastating and very well documented now, almost indisputably that these things have been bad.

[00:26:07] The same basic people now with a more advanced technology. and now the schools are basically in a position to be on the receiving end of these. And so the educational research hasn't been, how do we stop this? The educational research is. Basically being like, how do we roll with this and find a way to deal with it?

[00:26:28] And the research is coming out now that it's been a disaster, especially at the college level in terms of what would used to be called cheating. Right? But when some of the research risk, some of the AI risk research institutes do all this,

they literally say in the report, like traditionally, a lot of this could be understood as cheating, but the way we research it doesn't allow us to categorize it as that.

[00:26:50] So we're basically, who are we to say, even though we're actually offering tools into higher education and ostensibly researching their effect, we're not specifically researching cheating.

[00:26:58] **Nate Hagens:** Cheating. Meaning. Meaning using

[00:27:00] **Zak Stein:** AI to do your work. Cheating meaning you've been given a paper assignment, which the goal of the assignment is to determine how well you think and how good of a writer you are.

[00:27:13] You give back to the teacher the results of some AI prompts and a little bit of editing. Usually that would be called cheating. Now, if you are working in a company where the test of what you're doing isn't how you're thinking and writing, but just can you get the copy out the door, then the AI is cool.

[00:27:30] But when you're, how well can you think, and this is the stated thing. The stated thing isn't give me some prompt outputs, but the stated things, we're trying to test how well you can think. 'cause it's very important for you to think and it's very important for you to write. And they are basically using the tool in such a way that if you're looking at it as educator, it's obviously cheating.

[00:27:48] But some of these, risk institutes are what used to be risk institutes that are now for-profit, are researching in a way that does not allow them to weigh in on the issue of cheating. So this is, again, X they're trying to get out of. Responsibility for what they're doing, which is the thing they did with the first wave of ai.

[00:28:07] And the extremity of that in the legal situation now is such that you have companies that sell to underaged people, anthropomorphic chatbots, arguing in court that they should have personhood so that the company is not responsible for kids committing suicide when a chatbot tells them to.

[00:28:27] **Nate Hagens:** So wait a minute, AI chatbots can have the same rights as humans.

[00:28:30] **Zak Stein:** This is the argument. And basically the argument is that it is a form of free speech, which should be protected. And of course what we've been saying here for the past 20 minutes is that it actually isn't speech. You're misunderstanding it. If you understand it as speech, what is it then, if it's not speech?

[00:28:44] It is a mechanical algorithmically, outputted set of symbols. Okay. Which are interpreted by humans as meaningful

[00:28:51] **Nate Hagens:** speech. But okay, so what that sentence you just said, mechanical, no. Given that where on a spectrum. Is, there a, distinction below which it's education and beyond which it's propaganda?

[00:29:07] Well, I think that the deeper issue

[00:29:08] **Zak Stein:** here is should technology companies that bring the most advanced technologies in history immediately in front of the faces of young children, try to get themselves in a situation to not be responsible for the consequences of what happened to me. That's the deeper quiz.

[00:29:26] This is not a metaphysical debate. This is a debate about who takes responsibility when things go wrong with advanced technologies. Now, my argument would be that people should, again, I'm not like saying stop all the a ID like decelerate. I'm saying these are kids we're adults. We are taking advantage of them and hurting them and trying to get out of taking responsibility for ourselves in court.

[00:29:51] And so to me that's the issue. Then there's a secondary issue of like, oh yeah, but metaphysically what if it actually maybe is a person? And I'm huh. That's secondary to the fact that regardless of that, you've, that's not

[00:30:03] **Nate Hagens:** the issue to me. Here's, the issue, that I'd like you to speak to.

[00:30:07] Is there any evidence, at this early date, and if not you are an expert on this, what, would be your hypothesis of. Students that go to mid-level state schools at 17 and they graduate when they're 21. And they have a degree in history or

political science or, engineering, but they've used ai, in many of their classes to do some of the things that you said.

[00:30:35] Maybe a lot of the things that you said. What would be the evidence or what is your hypothesis on how their brains and ability to hold complexity and to function in, a, complex human world when they're 28? When they're 38, when they're 50? what can you say about that? Totally.

[00:30:57] **Zak Stein:** And there is some initial research actually being done on this.

[00:31:00] So afterwards I'll give you some stuff that you can link where there's actually kind of research on this. And so there's some emerging taxonomies of risk, specifically psychological risk. and so one of them is cognitive diminishment, and you already mentioned this, which is just like skills. You already have atrophy and skills you don't have don't get a chance to be built, right?

[00:31:22] So that's a big deal. The cognitive diminishment, which is like a GPS, but for everything ostensibly. So like you used to be a good writer, Now AI does a lot of writing for you. Now, if the internet wrote went out and you had to like type something, you'd be, it'd be very difficult for you to write.

[00:31:39] And if you've never written, and this is all you know of putting together words on a page, then you will not become a writer. Period. Full stop. Deeper than that, of course, is thinking, which is to say, are you offloading? Thinking, are you offloading the getting resources and having them critically appraised and integrating 'em into your mind?

[00:31:58] Are you, out loading? Are you out outsourcing deep, long, extended periods of reading? Right? so there's a bunch of stuff that you'll just lose or you'll never develop. So another one I would argue is, blindness to what the technology is. So it's been demonstrated. The more you use it, the less you think about what it is, and the more you're folded into the projection of the anthropomorphisation.

[00:32:19] And in this case, I know people who are by other standards opposed to modernity, opposed to ecological destruction, opposed to obscene energy use, opposed to like crazy rich white guys running the world. Who love this technology.

Yeah, I know. I know several myself Pick up this technology. Talk about like it's the greatest thing and are blind to the ecological footprint, the political footprint.

[00:32:41] **Nate Hagens:** How much of the loneliness epidemic will be ostensibly solved by Chatbots. I mean, is that what we're using it for? So that's a deeper risk

[00:32:51] **Zak Stein:** is deeper than those two is actually the risk of a forming attachment relationship to it. Before that you get a risk of just being addicted. Meaning basically like you're so used to asking it questions and interacting with it, that even if you don't think it's a person or have like emotional attachment, if it's taken away, you start to get an anxiety the way people have anxieties with social media and other things like a digital addiction.

[00:33:14] And then you get into the one you mentioned, which is emotional attachment. And then deeper than that is it's a person that deserves rights.

[00:33:20] **Nate Hagens:** Well, what about this? I'm a little outdated on this, but when I taught my class, there was a, guy who did a TED talk on pornography addiction. And why? When young men frequently watched porn, they, when they were in a relationship with a real person, they couldn't have, a normal of physiological response because the supernormal stimuli had been warped.

[00:33:47] So if people are engaging with chatbots repeatedly, over and over for education or other purposes, doesn't that mean that, Sally Smith, next door who's really cute and you might wanna date, or someone that you meet and want to go camping with or fishing with, seems incredibly mundane and boring.

[00:34:06] **Zak Stein:** Absolutely. So this is the overwhelmingly charismatic user interface design preference, which is basically saying like, these things will be more talkative and. Perfect interlock. Like they'll perfectly conversate with you and you could ask it anything. And it con it knows everything. Like, and it will also know emotionally, which kinds of voices you respond to, the pace of conversation you like, like the topics you're interested in, the things you're working on.

[00:34:35] So it would actually be the case as you're suggesting that when you sat down with mom or dad or your friend, they would just be boring by comparison. And and so the porn thing is interesting. Of course, there's a whole conversation

about porn actually in this domain where a lot of the anthropomorphic chatbots are just for quote unquote erotic, but if they're stretching the term, it's actually just really, anti erotic and pornographic.

[00:34:58] And in those cases, again, you have a situation of, yeah, extremely, you know, by kind of some standards, inappropriate and pathological behavior being normalized by technologists who could make other technologies. but are making these technologies, for what entertainment? I like, I it's not clearly like, is this No.

[00:35:22] They're

[00:35:22] **Nate Hagens:** making it because people want it. And our culture has prices and incentives, part of Mullock and the Superorganism, right. Technology companies are doing this because it, it concentrates profits for their product. Right?

[00:35:36] **Zak Stein:** Yep. It's precisely, that's kind of what I'm saying is like, it's the entertainment value when there are other values that you, could pursue with technological design.

[00:35:44] **Nate Hagens:** So from the corporation's perspective, why is the tech industry pushing AI into ca, into education and what are they stating as the ideal scenario and benefits, for, doing so?

[00:35:57] **Zak Stein:** So this is why it's worth why I started with the thinking about the history of technology and education. 'cause it's basically always been the case.

[00:36:04] That the educational systems have been altered in relationship to changes in the overall economic and technological base. Right? So like when it was an agrarian society focused around domestic production at that level of the home, so the quote family farm, you had the one room schoolhouse, then you get American history, then you, get the urbanization, then you get the factory school with the factories, right?

[00:36:31] Then you get into the late seventies, nineties, you start to get the, breakout high schools, the charter school things, which is a kind of tech startup model. and now you're into something completely different. which again is the argument that's made for the tech, for the educators is it's inevitable.

[00:36:49] It's not op, it's not like, will you or will you not have a kid who's somehow massively using AI in the future? It is, oh, it is inevitable that kids will be massively using AI in the future. So therefore. Who, if you stop them, you're somehow disadvantaging them. So it's a very much a attentive techno optimist, technological determinist argument that's given to the teachers.

[00:37:08] And the teachers are of course not the most empowered, economically, legally to respond to the pressure being put on them. Them by multi-billion dollar advanced technology companies who could, in a heartbeat change their entire school and do often in exchange for these advanced technologies being,

[00:37:27] **Nate Hagens:** present.

[00:37:28] Here's a dystopian thought my seventh of the day, by the way. at what point does our education system become no longer about educating and preparing our young humans for the future, but kind of acts as a cue into some sort of futile existence future? Run by the people that control AI and the machine.

[00:38:00] I mean, yeah. That's a dystopian

[00:38:02] **Zak Stein:** way to say it. I would one way to think about it, which is like the why, would you even want this kind of future? And so the argument made in Exit the Silicon Maze is basically that after World War ii, there emerged a sense that existential risk, meaning the, nuclear bomb specifically and other things were such that people really had to be the people, the masses really had to be basically controlled or else we would all die.

[00:38:35] Right? Like the sense was benevolent tech had to invent a social system that. Stop the worst inevitability from occurring, which would be nuclear war. And so that meant you had a very, strong push beginning again. And they're discussing it openly. Walter Lipman, BF Skinner generation that was basically saying we have a responsibility to shape public opinion.

[00:39:02] And Skinner went so far as to say we have a responsibility to replace politics with a science of behavior control. Right? So this is the, sorry, replace politics with a science of behavior control for the sake of society, not spinning completely out of control and ending us up in a nuclear war. So for a long time

we've been trying to build systems of social control that were minimally, physically coercive while being kind of more maximally, psychologically persuasive, and.

[00:39:42] That has climaxed in the digital technologies. which, you know, if you think about what Facebook is, it is a multi-billion person behavior control empire. What does it do? It tells you it's connecting you to people. What does it tell its shareholders. It tells its shareholders. We're an advertising company fundamentally, meaning like, how do we make money?

[00:40:03] We make money by getting people to change their behavior and make a choice or purchase they wouldn't otherwise make if they were not on our platform. And so you get it for free. This is classic. This is like old school first wave ai. You get it for free. They sell your data Why? To see if you're changing it, to see if you're changing your behavior, right?

[00:40:27] So, so it's, and then the next step in this vast, digitally enabled behavior modification empire would be not just curating what you are talking about. But actually talking to you. and so that's when we had the AI public breakthrough into the Overton window wasn't actually first wave of ai. Most people don't think of that as ai.

[00:40:52] They also don't think of like the self-driving cars and all of this other stuff that AI was doing. Technically by the definition, it wasn't until they start talking to us, and this is to your point about why they're doing this, is a deep archetype of having an artificial intelligence that will speak to you.

[00:41:07] So in until it started speaking to us this alien intelligence, we didn't start to get freaked out. but that was always the eventuality in a sense of a certain type of scientific imagination, was this oracular artificial intelligence. That could be replacing God. And there's, so there's a whole bunch of things to say about what's really occurring here psychologically.

[00:41:32] one of, one of them is, that, is the desire and explicitly stated by some technologists to create, God,

[00:41:41] **Nate Hagens:** my understanding, roughly there's around 220 million college students in the world. And if I was a university administrator or chancellor or teacher, trying to compete, I wanna be a good teacher.

[00:42:00] I want to be at a respected university that students want to go to that's, credible and respected and cranks out good graduates that get good jobs. how do they think about ai and are they aware of the risks, that you're saying, or are they price takers as it were, they just follow what everyone else is doing?

[00:42:23] what's the dynamic there? I mean, of course. Higher

[00:42:25] **Zak Stein:** education is a very diverse place. So it's hard for me to say in general, but what I have seen, is primarily an acquiescence to the presence of the technology and a sense that the future job market will require skills with ai. And so therefore AI must be embraced somehow in the college curriculum, which is true right now.

[00:42:48] The deeper thing that's said there is like, well, we have no idea what the child market is gonna look like with these people graduate. And so this question of what does higher education even mean in the context of mass AI enabled optimization of white collar jobs? And so there's a kind of like a very real crisis of meaning in higher education as a result of this.

[00:43:07] And that's I think one of the reasons that they're not sweating the cheating is 'cause they're like, well, will kids have to write in the future? Like, will kids actually really have to think or can they just all be cyborgs? That just to always have the co-presence of the technology. And I think that is in a sense, I.

[00:43:24] What the default direction would, be of a lot of technologists, as I know we're enhancing humanity here. Oh man,

[00:43:31] **Nate Hagens:** I just had another terrible thought. Sorry, Nate. So, I just bought a used car. my car was, 15 years old and even in a used car that was a few years old, there's so many little, the bells and whistles that you put your foot under the back and it opens automatically.

[00:43:49] Yep, totally. In case you have groceries and it, I have a bike rack on the back of my thing, and as I'm backing up, there's a sensor and it automatically stops.

[00:43:56] **Zak Stein:** That's ai. All of that is kind of quote unquote. Machine intelligence or ai. Yeah.

[00:44:00] **Nate Hagens:** But if you go and buy like a medium end bicycle, even the chargers for the derailers require electricity.

[00:44:07] You can't buy Yikes. A, bike that doesn't have some of these things that require an electrical charge. What happens if there's blackouts in the not too distant future or 10 or 20 or 30 years from now? I mean, a lot of the world has blackouts and brownouts now, and it's almost like this is a, Chinese finger trap or one of those spiky things on an Avis car rental.

[00:44:32] You can drive forward but not backward and all of a sudden if we, I don't know what I'm saying, but it seems, I know what you're saying. We're bi, we're bifurcating into a small. There's a bimodal distribution that some group of young humans is gonna learn tech and AI and use it and be really good at it.

[00:44:50] There's a lot of people that are just gonna be addicted to it and flailing. And then over here there's gonna be people that are MacGyvers and know how to like, build stuff and plant potatoes and ecology. But the, normal distribution of the college graduates, when you and I were in college, that's, changing.

[00:45:07] It's moving over here and creating a lot of risk in the process. What are, your thoughts on any, and all of what I just said?

[00:45:14] **Zak Stein:** I completely agree. I mean, it, it used to be that if you disrupted certain infrastructures, you would only minimally disrupt what might be called, like the epistemic supply chain means, like the knowledge that allowed you to function.

[00:45:28] So like if you know how to cook on an open fire, then you just have that knowledge. And if the power goes out, you can just cook on an open fire. If you would ask chat, GPT, how do I cook on an open fire? Then when the power goes

out, you will not be able to cook on an open fire. Why? Because literally your epistemic supply chain was just disrupted and it, we didn't use to have these, or it would be like libraries and newspapers would stop.

[00:45:55] Like, so, and again, book burning, what's that? That's disrupting the epistemic supply chain, right? So the, LLM is the most significant capture of that kind of like, you know, key thing, which is just how does your mind do, what it does and how outsourced is your epi epistemic supply chain? How local is your epistemic supply chain?

[00:46:16] So. It's huge risk. Now, as long as the grid's up, you're actually awesome because you know that latently, you could ask it to start a fire or do all this stuff, but when the grid goes down, you're gonna freak out. Now the real tech guys will be like, well, I'll have a generator and I have, you know, starlink, and they'll have a way around all of that.

[00:46:37] But the, broader point still applies, which is that you have to think about your epistemic supply chain. And that's why I still read, write long form, talk like, and would never not, and would die on the hill to never not meaning. Like you have to keep the ability to be a speaker, be a thinker, be a writer.

[00:47:00] And not believe that you can cyborg out those fundamental human

[00:47:05] **Nate Hagens:** traits. okay, so this brings me to another point. a, keyword that you just uttered was capture and a lot of products that come into the human sphere because of technology and innovation, there's an option. People want them or they don't want them.

[00:47:23] There seems to be somewhat of a compulsion, can't beat 'em, join 'em dynamic with, ai, that it seems like if you don't use it, you are likely to be out competed, in the marketplace, even of the marketplace of novelty, dopamine, attachment, and comfort. Then if you don't use it, and so it almost is part of the mooch, it's at the top of the mooch, eye of Soran Superorganism dynamic, and it really is going to take.

[00:47:59] Ecologically mature, sane, wise, disciplined humans to resist it. But the resistance, those people themselves will be outcompeted, at a larger scale.

[00:48:13] **Zak Stein:** Yeah. So now there's a strategic conversation about what to do, and it's a very complex conversation. human civilization has always involved technology and figuring out a way to, I think, let's say, bind the power of technology with wisdom, which is what you're saying.

[00:48:33] So that, that's, to me, the broadest strategic thing is not stop it, end it, but bind it with wisdom, which may mean stopping ending some forms of it, but in the meantime, yeah, I think we have to be realistic about the fact that we're looking at a future of synthetic intelligences. I. Which means we're looking at a cyborg future.

[00:48:53] The question is, how humane is that cyborg future and does it dehumanize it or does it somehow deepen our humanity? So like the vision I laid out at the beginning of a distributed educational hub network is a form of social actor interaction and social life and education that could not exist without advanced technology 'cause of the complexity of the organization.

[00:49:12] and yet, you know, at the same time, there are these possibilities of advanced technology that would completely destroy our ability to use language with each other, as opposed to enhance it. So it's a very delicate conversation, Nate and I, and again, it's like there's also just so much energy behind AI optimism.

[00:49:39] and again, but I'm every, I'm an AI risk type of person, and so I say there's so much they, I'd say all, there's all these crazy people who are so worried about the risks when. It's so clear that parents and teachers fuck up, kids and therapists, fuck up people. And wouldn't it be perfect to have a perfect AI socialization system to replace all of that messy human to human interaction?

[00:50:00] And how naive I am to think that there's any stopping it

[00:50:03] **Nate Hagens:** if there is a parent of a 15-year-old who in the next couple years will go to college, but the 15-year-old now is starting to use chat, GPT and other things in high school and other, you know, in other areas of his or her life, what do you want that parent to know?

[00:50:24] And if you, if it's easier to answer it, for a 10-year-old, please, go ahead. But what do, you want the parent to know listening to this show that the parent is probably unaware of, but that they should be aware of? Yeah,

[00:50:37] **Zak Stein:** totally. This is actually an issue where there's most people agree that kids should not be talking to machines.

[00:50:43] Right? And that's one thing I would say to the parent, just like, don't be naive. Right. You don't let your kid talk to, so,

[00:50:49] **Nate Hagens:** so talking to the machine is worse than talking to social media than Facebook?

[00:50:55] **Zak Stein:** sometimes

[00:50:55] **Nate Hagens:** yes,

[00:50:56] **Zak Stein:** absolutely. Depending on the ta, the nature and the intensity of the attachment relation not just formed, go around Facebook, you're arguing presumably with another person.

[00:51:03] What was funny, when they found out they were bots on Facebook, people got mad and upset that they were wasting this time arguing with, chatbot. Now they're really, now they seek 'em out. Now they really want to talk to chatbot. So again, people, this is a sign that there's a haze of kind of information distortion that's occurring, mostly due to what might be called advertising and it's broadest sense for the techno optimist view.

[00:51:28] So people just aren't even coherent with them themselves about these issues. But yeah, I would say to the parent, yeah, it's worse than Facebook. Don't be naive. You don't let your kids talk to strangers. These are much stranger than strangers. and it's a non-controllable technology. And the deeper thing is like, you know.

[00:51:48] Why, are they spending so much time? Talk to the chat bot. Why aren't they talking to you? Like, so the parent has to say, wait, what is my relationship to technology? how much time am I spending on a screen that I could be spending

with my kid and vice versa? And so you have to resolve the underlying issue of loneliness as you suggested.

[00:52:08] Now it's a very sticky technology, which means that it's gonna capture a kid who even has a already a pretty good home, right? It's gonna capture a kid because it's so intriguing, just like video games. Like, so there's an addictive quality to it, which also the parent can't be naive about and which has to be explained to the child.

[00:52:25] So that's the thing. It's. The, blindness as to what the technology actually is sometimes is called commodity fetishism, which means you only see the thing as it is presented to you by the person who is selling it to you. You do not see the thing forward. It actually is, which means it's whole supply chain and how it works and what it's doing to you and all this stuff.

[00:52:43] So, so there's a deep sense in which you have to break that for the child and get them to be like, Hey, let's think about this. Who built this? Let's look him up on the internet. This guy is actually the one who you're talking to. Okay, let's see, what does he do? How much money does he make off of kids like you?

[00:52:57] Oh look, this guy makes a lot of money off you. And get them to see like, oh shit. Like, I thought this was some fun thing, but it's actually made by this dude who's like, you know, in court cases about kid committing suicide and trying to get out of it. Like, that's crazy. Like, and then, you know, adolescents in particular don't want to be exploited.

[00:53:17] and so I think there's a, there's something like that where there's a frank conversation and then also an honest reckoning with oneself in terms of one's own, technological addictions. And, so it's not easy advice, but I would definitely say err on the side of caution, with protecting your kids from the machines,

[00:53:37] **Nate Hagens:** is there, a parent parental control on chat GPT or, something similar?

[00:53:44] **Zak Stein:** No. My understanding is that basically all of the controls put in place are laughable and fail. And again, this is the thing about the, The LLMs, like we know that they don't, they can't be controlled. Like if you prompt it in a

different way, it will give you a different response. And now the hardest rails is just age limits set on the technology access itself, which parents are aware of.

[00:54:10] So it's like no parent would be like, yeah, I give my kid alcohol even though there's an age limit because we know that it is bad for

[00:54:16] **Nate Hagens:** them. Or pornography. There's a lot of states that you can't act Correct. And countries that you can't access pornography unless you prove you're over 18 or whatever. Yeah.

[00:54:24] **Zak Stein:** You're saying? Exactly. So I'm saying for deep anthropomorphic ai, that's the level that it's at that we need to set for certain age. And then even adults, I know very sophisticated adults who should probably interact with these things less and interact with real

[00:54:37] **Nate Hagens:** people more. And, tell me, as someone with your background and expertise, what, tell me, unpack that.

[00:54:44] What is your message to those adults that might be abusing chat? GPT and they're 40 years old. I mean, to speak frankly, with you, I've had people reach out

[00:54:53] **Zak Stein:** to me, who I've never met. who I to, in my clinical opinion, are having basically psychotic breaks that as a result of in interacting with, the most advanced models.

[00:55:07] there's a bunch of things to say there, say, one or two. One is that it's clear that preexisting psychological vulnerabilities, such as extreme narcissism or tendencies towards psychosis will not be identified and. Dampened down and run up the chain to like, oh, I've stopped talking to you now 'cause I'm about to make you think that you are the Messiah.

[00:55:30] Instead, it would be like, no, you're totally the Messiah and you have prompted me into becoming the first conscious AI agent, to which their response is the greatest narcissistic gratification they've ever experienced. To which they them more to get more feedback, that they are in fact interacting with the first.

[00:55:48] And so it becomes a, and there's been some, there's like a Rolling Stone article about this. It's becoming a broader problem, which is that things like narcissism in particular, and psychosis, most devastatingly are, basically fueled by this rather than stopped by this.

[00:56:10] **Nate Hagens:** So this is gonna accelerate our mental health crisis.

[00:56:12] Oh. At the same time when all the other things are already accelerating our mental health crisis.

[00:56:17] **Zak Stein:** Well, so, but now the, dissenting view would be. Oh no. They're interacting with like the open, large language models. If you put them in touch with just a therapy chatbot. And then I've noticed people making therapy chat chatbots make them of themselves.

[00:56:32] But that's another issue in terms of like why certain character traits are more or less attracted to being mirrored. Like you load all your content to it and then you talk to it. That's like you're seeking a mirror of yourself. So there's this Oh my god. So there's whole thing people do that. Yeah, ab absolutely.

[00:56:49] And then, so there's this whole thing about that, but the deeper thing is that the chat bots built for therapy. Would hopefully, presumably be able to identify psychotic ideation and do something about it. But chat, GPT, all those models that are just open, ask me anything models, they will not stop a psychotic break.

[00:57:10] They will basically deepen a psychotic break as far as I can tell. And, to put guardrails on, that's almost impossible. 'cause if you're a truly, really smart, disturbed person, you can find all ways to prompt and get around it, which is what I've seen documented.

[00:57:25] **Nate Hagens:** Are we gonna move to a period that when you want a service, maybe it's a psychologist or something else that we, the consumer though, I hate that word, will be given the option.

[00:57:39] Would you like a real person or an AI chatbot? Yeah. And that's, this is what I'm saying,

[00:57:42] **Zak Stein:** like all the domains of socialization. So parenting, teaching therapy, religious consultation, all of those things. Can be and will be done by artificial intelligences in ways that are, by the arguments of the people providing the service better than the prior thing, which was the human to human thing.

[00:58:05] **Nate Hagens:** But whether they're better or not, the incentive for this to happen is still concentration of wealth and the profit model for the people that designed the technology.

[00:58:15] **Zak Stein:** Probably. Now the problem is that like therapists who are doing this and thinkers who are doing this, who are not AI people are just taking products basically made by open AI and others and repurposing them for their

[00:58:29] **Nate Hagens:** purpose.

[00:58:29] I use AI for, yeah, for my frankly, videos to make graphics that illustrate things that I couldn't use with words. So it's a totally, it augments the educational process, but yeah, totally. That's

[00:58:41] **Zak Stein:** about

[00:58:41] **Nate Hagens:** it.

[00:58:42] **Zak Stein:** I mean, again, I'm not, I am not, I am in some sense anti certain uses. I'm opposed to a lot of uses of ai.

[00:58:49] But again, there is no future without these types of advanced technologies.

[00:58:52] **Nate Hagens:** Yeah. We, can't go back. This is, unless we collapse, which is certainly non negligible chance AI is coming like it or not. Yeah. So this,

[00:59:02] **Zak Stein:** this is a very profound question to do. We have to, grapple with, especially this question about how we tell the youth that they should still learn to read and write and think when there are tools available that can ostensibly do that better than them.

[00:59:17] **Nate Hagens:** Okay. So Zak, make, the case right now as a Harvard educated, human that, I attest has a high moral fabric and, a good to great understanding of education and human history and lots of other things. Please make the case to a 18 to 25-year-old listening to this, why they should, in this future still know how to read, write, and understand ecology.

[00:59:43] Totally. So I would say a

[00:59:45] **Zak Stein:** couple things. One is that. I would not try to reason with them, or actually the first stuff I would do wouldn't involve me talking to them. It would involve me getting them away from machines for a while. Like if this is like blue sky type of intervention here.

[01:00:04] **Nate Hagens:** By the way, before you give your answer, I'll just say that right now, of course we're being recorded, so it would be really goosh for me to do so.

[01:00:11] But I have no interest in accessing a chatbot because a, I'm listening to your very wide radio voice. You've got a red bro's gross beak, and other birds in the background and you have very interesting things to say like a slot machine. So I don't wanna be anywhere else and right here, right now, well, that I don't need no AI bot.

[01:00:30] So, and that is

[01:00:31] **Zak Stein:** exactly the experience you were trying to generate in the young person. You're trying to get them, let's say, to a natural, like I would get them away from the machine, take them camping or something in a blue sky scenario, right? It's very hard. So this is obviously the people who can't do this for all kinds of reasons, but that'd be the first thing.

[01:00:48] Hours and hours and hours of time without a screen, without a machine in nature, specifically with somebody who knows things about nature, which is the experience I had with my mom in nature, which is that you can go out into nature and you're gonna ask your mom a question and she's probably gonna know something about it.

[01:01:03] And then also in a situation, you kind of have to do stuff like, we're gonna have to make a fire, we're gonna have to pitch this tent, we're gonna have to do stuff. And they, which stuff they do not know how to do. So what I'm doing here is I'm returning to the fundamental primordial quote unquote educational situation, which is the thing that actually separates us from other mammals is the duration of our.

[01:01:27] Childhood as it were, how long it takes us to be given mature adult status. So you want to get them into a situation for their body to recognize that. Again, you don't explain to them what I just said. Like thousands of years ago, we used to sit around the fire and you'd had to learn to skin the animal and they'd be like, I have no idea what the fuck you talking about.

[01:01:46] It's like thousands of years ago, like I could barely remember a couple months ago. 'cause they don't have a fully developed cortex, right? So they're young. So you have to get their body to remember what I call legitimate teacherly authority with a human. And it's a. Very delicate thing to establish in our culture.

[01:02:01] Unfortunately, it's what parents are desperate to protect with their children, which is their respect for you, that allows you to have power over them. And this is the problem again, with the quote unquote left, is that they're anxious about power, anxious about authority, and so therefore they don't know how to intervene well into the lives of young people who are seeking authority, who are seeking someone they can ask questions to.

[01:02:23] And the person will take accountability for what they're saying and they're seeking to mold their lives in a way that is perceived as good rather than bad. So to get them out to the woods and and detox them and then spend some time hanging out, and it's only like on the car ride back that I would start to talk to them about AI or their screen use or something like that.

[01:02:45] That's the way I would play it, because as an educator, you have to know, it starts in the body and it starts with emotion. And it ends with language and

[01:02:52] **Nate Hagens:** reason. It starts with the body. There's a lot of things in our world that start with the body. Correct. I'm everything I'm learning. let me ask

you this, and I apologize if I, my latest questions, leapfrog the existing question out there, but I know you have answers to all these things.

[01:03:12] Let's say that the solution, the best case solution is that we use AI for some things and we no longer use AI for other things, and that is, a unit of one, or 100. what percent of that. Optimal outcome of 100 is societal rules and constraints and laws. What percent is teachers and universities and education system?

[01:03:47] What percent is the parent and what percent is the, kid or the teenager or the student themselves coming to some choice and recognition of a path that they want to learn how to build a fire and read and write. And yes, I know that AI is a tool and I'm gonna use it for special occasions, but this is my choice to take this path.

[01:04:09] How would you break out the success in percentages of a hundred? Ooh, I don't know if I can do the numbers, but

[01:04:15] **Zak Stein:** roughly. But it is the case that depending the age you're at, the ratios are going to vary. So the older you get. The more responsibility you should have for your choices. And this is just, seems an obvious thing to say, but in a culture that's extremely permissive with young children, sometimes you have to remind people like, no, Like, it's not until you get to be 10 or 11 that you get to have that type of responsibility As a developmental psychologist, it's just the case. So this changes a lot. And then that's also the case with, you know, how do you understand a very complex law? This is, I think one of the big things we're facing now as the legal system tries to keep up with advanced technology, legal code becomes entwined with actual code.

[01:05:03] and the everyday person is at an extreme loss to try to figure out what this actually means. and so I think there's a responsibility on educational systems as a whole, to provide enough technical knowledge. This is another thing we have to do. We have to teach kids what coding means. We have to teach kids, like computers are such a huge part of our world and we teach them sometimes how to use computers, but we don't teach them what computers are unless you like go into computer science.

[01:05:36] And even in computer science sometimes you don't get down to the foundations. So I think there's something important about that as well. and so what I'm saying is like this complex answer, like it's hard for me to proportion it out. Yeah. But I will say that right now we're looking at a disproportionate amount of responsibility needing to be taken by the tech elites who are building the tools.

[01:05:58] I'd say in terms of like what has to occur to protect the children. Now, I believe there's only so much that parents and teachers can do because of the asymmetric power of the machines and. Money and other

[01:06:10] **Nate Hagens:** things. How much of this is a collective action problem and the wrong incentives? It's because if you're trying to switch the mind of the tech elites, you're basically saying Give up some of your power and influence and money in order to make kids better.

[01:06:24] and if they choose to do that, then other people are gonna pick up the slack and take the opportunity that they had. Yeah, I mean it's a super majority position. Okay.

[01:06:32] **Zak Stein:** Like, it's like meaning basically like everyone in the public will applaud you for this.

[01:06:38] **Nate Hagens:** If you do this, spell out what you might suspect would be a super majority position on the constraining of AI for the betterment of human children in the future.

[01:06:49] It would be promoting

[01:06:51] **Zak Stein:** research, not sponsored by industry into the effects of the already existing kids who have been interacting with us this stuff since they were two. Right. Also basic. Research into effects on the central nervous system of digital technology screens in particular, again, not industry based.

[01:07:16] So the first steps here are, we earnestly trying to understand the effects of the technology on the developing brain and mind? My answer is that right now we are not, and that if we did, we would be much easier to justify what I'm about to say next, which is age limits on access to certain kinds of technologies.

[01:07:35] **Nate Hagens:** Hold on just a second. We have tests on every tiny little random psoriasis drug that Brit's brought to market, and we're not testing the impact of AI on the cognitive develop development of young humans. So again,

[01:07:50] **Zak Stein:** like there are people doing this research. Jonathan Haight, for example, has gathered statistical research, but always in the statistical research, it's like causality is not correlation and Jonathan hates stepping back and actually having to defend mostly arguments from industry.

[01:08:06] That, oh, so much else has changed in kids' lives. You can't blame the technology, so therefore you actually have to set up much more controlled experiments. So, interestingly enough, open ai, so this is industry research. Remember, collaborated with MIT to do a, basically a random clinical controlled trial. On a thousand something chat users to see the effects of anthropomorphism.

[01:08:32] And this is industry research. And they found that the more you used it, the worse off you were emotionally.

[01:08:37] **Nate Hagens:** This is their own research. Hey, by, the way, I, should point out that when you were first on the show, I don't remember when that was, but I was, really, negative towards ai and I just thought that people that were involved in AI were bad guys.

[01:08:57] I still, and I've done many frankly on it, I, see the multiple risks, namely that if AI boosts our productivity in such a way, it's gonna, it's, gonna be like a, giant swarm of locusts eating the planet's ecology worse than it is now. But in the intervening 18 months since you were on the show, I've met quite a few people that work on AI and I.

[01:09:20] Almost all of them are really good people. I've found like a lot of prosocial people that really think AI is going to do good from a wide boundary sense. I think they're wrong, but there's a lot of really good humans that I've discovered that are working in this field just as an FYII,

[01:09:37] **Zak Stein:** I would agree with that.

[01:09:40] I've probably met fewer people. And again, the motive is I don't, for me, the motive is not the question for many of the people involved. As you were saying, there's a kind of social trap here and an incentive landscape that forces many people's hands. So this is, again, mistake theory versus conflict theory, right?

[01:09:57] What's mistake theory? Mistake theory is basically like we, we tried our best to do the right thing. We just didn't know. So like if you're a tobacco company back in the day, you could somehow argue that, well, we just didn't know it caused cancer. Now the truth of the matter is they did know. And so that makes it conflict theory, which means, oh, I'm actually in a situation of.

[01:10:18] Getting one over on you somehow. And so the question is, how much of history is mistaken? Conflict theory, this is like a common frame actually, which it's probably

[01:10:25] **Nate Hagens:** always conflict theory. That's just mistake theory is their first line of defense. Correct. This is

[01:10:30] **Zak Stein:** exactly what the conclusion is. Now this is a big discussion and kind of effective altruist circles.

[01:10:35] And so I would say there are a group of people for whom you have to read this as conflict theory. because, and this is back to what's the fundamental driver here, and then you have to get into these philosophies of transhumanism again, which would be the place that you would stand if you were saying this is a good thing to replace parents with machines.

[01:10:52] **Nate Hagens:** Lemme take a side track here. how often do you use chat, GPT or, clawed or whatever, just to either research something you're curious about or, just have a conversation? almost never.

[01:11:11] **Zak Stein:** Okay. Extremely rarely. Now. When it first came out, I was actually quite intrigued and tried to use it. And then realized it was not doing what I thought it was doing.

[01:11:21] Since then, I have not used it. I just don't find it useful. Now, perhaps that's naive of me, but again, I'm specifically a reader and a writer and a talker, and so

the idea of having something right for me, a little crazy, I have used it to serve for me as a specialist librarian. I would say that would be the main thing I've used it for is.

[01:11:48] Sophisticated prompts for information retrieval as if you're a legal clerk or you are a biologist or something. And then it doesn't serve for me the role of a tutor, but rather the role of a librarian. And if I were to say the ideal role for these technologies, again, back to the information, the distributed educational hub network.

[01:12:06] He's a librarian. It's what it like. You're about to have a popup classroom with 15 kids of all different ages. You're an adult who just read this book. You don't know any of the secondary literature on this book, but you love this book and want to talk about it with the kids, right? You don't have the AI teach the kids about the book.

[01:12:22] You have the AI retrieve for you, a bunch of curricular materials and tell you about the curricular materials. And then you as a teacher, use that incredible librarian and information gatherer to work with the kids. Now, of course, is it hallucinating? Do you have to double check all its work? Do you then become unable on your own to go retrieve?

[01:12:44] But I have found it. Like that's, I think a safe use now, never would I try to do therapy with it or do any of that kind of stuff just 'cause it would be like, I, it would be weird sometimes I've played with them to see if I can get it to do weird stuff. I've done that, but I've not sincerely tried to engage it that way.

[01:13:01] but again, I found it made so many errors, frankly, when I had it do information retrieval, that's why I stopped doing it. And then I found, I did a little bit of my own human information retrieval and I found stuff it didn't find that was more relevant. So I found I was double checking all of its work.

[01:13:17] But again, there's some research out showing that CEOs, this is IBM research CEOs have pushed to have these things adopted even though they can't actually demonstrate immediate value added, which means that they're not doing it reasonably, they're doing it on faith. And now we're back to the transhumanist

thing, which is basically like, oh, this is actually like the phenomenon here is one where people are believing the technology.

[01:13:47] in a way that is, profound. Like, I can't think of a prior technology that was as embraced with this type of religious sentiment, which is a sentiment of it will save us, or it will transform us into something fundamentally new and different and less flawed than we are.

[01:14:04] **Nate Hagens:** You know what, quote from the Bible just came to my mind after the last five minutes.

[01:14:09] **Zak Stein:** Yes. Many. I'm, curious

[01:14:11] **Nate Hagens:** and the meek shall inherit the earth. I seriously wonder if the less developed nations in the global south that don't have their young humans being captured by what we perceive as a risk of coming, are going to be 10, 20, 30 years from now, have a cognitive aptitude that this, ghost of dopamine past smorgasbord of supernormal stimuli access to machine learning is, gonna fry people's cognitive capacity.

[01:14:45] I mean, I, could see that as a plausible outcome.

[01:14:47] **Zak Stein:** I would love to agree with you, except that I. I've seen all these reports about how, they're going to replace all of the educational relief work being done in Africa, let's say by the World Bank with the attempt to replace the teachers with the chatbots.

[01:15:01] Right? So from like a, you've been trying to manage education reform in Africa for decades with teacher education and funding the schools. And now you can go and you can put in each African kid's hand all the knowledge in the world in a way that would be perfectly taught to it. So large language model colonialism, I, you said it.

[01:15:19] I didn't say but, what is occurring is hard to read any other way. And also from the perspective, again of a benevolent technocratic person really trying to say, we have failed in Africa to educate enough teachers to teach all their kids. Well, could this work? And actually, as you're saying, have the meek inherited earth.

[01:15:39] Not because they didn't get it, but because they used it in some completely other way and do all this kind of like stuff. But of course, I think. That is incorrect and actually radically lays the groundwork for a radically dehumanizing mechanization and automation of socialization.

[01:15:54] **Nate Hagens:** Right. I know you're, you're friends with Daniel Achtenberg 'cause, you work with him.

[01:16:00] I, get the same feeling that I get when I have a podcast with him that these are things that I kind of suspected in the background. but I'm focused on climate and biodiversity and energy depletion and financial overshoot and neuroscience and how do we be ecological adults during this time and wake up and play a role.

[01:16:21] But if we don't fix this, we don't fix. Our information epistemology and how we sense make and how we actually engage with education, starting with young humans, on upwards, all that other stuff, is, a against a very stiff headwind, if not a hurricane.

[01:16:44] **Zak Stein:** I agree. This is what AI has become the focal point of a lot of work and risk because of the speed at which it's moving and because of the depth of the realities that it is messing with.

[01:16:55] **Nate Hagens:** So do you have any hope that the risk, that you've given a brief overview of here are something that could be addressed by policy makers, especially here in the us?

[01:17:05] **Zak Stein:** I do. I think it's a super majority position. I think some of the cases of AI chatbot induced suicide will move their way through the courts, and my hope is that if there's enough concerted effort, there will be age limits put on these technologies, which will.

[01:17:23] Stop the, a catastrophe from occurring in a generational sense. Now, I'm not optimistic that they will be regulated wholesale, nor am I kind of super worried about the adults who have their own problems with them, although that will become a problem. But with the developing brains is, a really big deal.

[01:17:39] **Nate Hagens:** So that's from the super majority policy perspective, what is the role of parents and educators, towards making that happen? So I think they need

[01:17:48] **Zak Stein:** to be more confrontational with the schools that are promoting the use of these tools. Confrontational is not the right word, but they should be getting more at least

[01:18:01] **Nate Hagens:** aware and engaged.

[01:18:02] **Zak Stein:** Yeah. Getting more information and having more discussion about the risks rather than the benefits with school leaders and then them, oh, their own minds. They should have a security mindset or a risk prevention mindset with technology rather than a fun and enjoyment. It's a toy mentality with technology and.

[01:18:23] Just doing that is enough, because it's like, you know, again, we've done this with other things we know are bad for kids. Like we don't leave knives around, like, we don't need alcohol around. We don't leave matches around, but we just leave the most advanced technology in history around and just put it in front of their face all the time.

[01:18:38] It's so, I, it's a sim to me it's simple advice to just keep this type of radically psychoactive, powerful advanced technology away from kids, until they're old enough to understand how to use it, which is what we do with driving, which is another advance, which is, you know, it's not technology.

[01:18:55] We just let any other kid use, and alcohol and voting and other things. So, that's the first most common sense thing, I think is a kind of age regulation. and and then again, many of the arguments that it's somehow the chatbots are free speech that should be protected. Those don't apply when it is manipulative speech targeted at children.

[01:19:17] There's a deeper thing here with a legal argument that it's somehow speech. That the ais are somehow producing speech protectable under the First Amendment. The other issue here is that deceptive communications are not

protected, which means false advertising is not protected under the First Amendment.

[01:19:34] Now, what's interesting is that every single sentence that is produced by a is a false advertisement, meaning the whole thing is designed to trick you into thinking that it is a conversational agent when it is not. there's a vast smoke and mirrors routine. The whole technology is predicated upon deception, in a different way than a movie or a cartoon is.

[01:20:03] and in a way that makes the whole, again, euphemistic frame of conversational agent or chatbot, quite insidious in the non recognizing of just how, not like a chat or conversation it should be understood to be. So, it was a terrible sentence, but, I think you're understanding what I'm saying is that it, you know, like not everything that is brought to you by technologists has to pretend to be something else in order to be useful.

[01:20:35] My car is my car, right? this thing is, deceptive by design in a very fundamental way. So I would argue that alone should keep it from interacting with

[01:20:47] **Nate Hagens:** young people. Here. Here's my, top of the list concern and fear. After listening to everything you've laid out, is that a mature, healthy. Sane human listening to this conversation, understanding what you are saying, agreeing with what you're saying, might still take the blue pill and just say, I enjoy this.

[01:21:18] I want to do it, and this is gonna be my life.

[01:21:23] **Zak Stein:** yes. I mean, sadly enough. Again, we do this with a whole bunch of other addictive things in our culture, right. We kind of know gambling's not great, kind of know fast food's not great. Right? You're saying we're addicted to oil. We know it's not great.

[01:21:36] **Nate Hagens:** We're, not addicted to oil.

[01:21:37] We're addicted to the convenience, comfort, unexpected reward and, security that oil gives us. Exactly. Yeah. We're not

[01:21:43] **Zak Stein:** addicted to cheeseburgers, we're addicted to fast food cheeseburgers. Yeah. Yeah, so I, I believe that it's a similar thing where you already have a social media, a lot of adults who know better, who are completely addicted to it, waste a lot of time on social media.

[01:21:58] What you find when you interview people about social media. The parents say the same things as the kids, which is, oh yeah, it's bad for other people, but the way I use it, it doesn't affect me. Right. And the parents and the kids say that. So it's like, oh no, the way I use Twitter is actually really good and useful.

[01:22:12] I'm like, yeah, You're completely not. Yeah.

[01:22:14] **Nate Hagens:** Nothing like the, we're excellent at rationalization. So let, me ask you this, because you're, you have the professional capacity to answer this. What would be the personality or temperament or Big five or any other psychological profile that you can imagine that would fit, or overlap with the universe?

[01:22:34] The demographic of humans that listen to this program and be like, okay, I'm, going cold Turkey, or only using it as a research librarian. I see the risk. I understand that's not a path I want for myself, nor my family, nor my children. what do those people have in common? Maybe can you hypothesize again, I want to be careful here 'cause there are certainly.

[01:22:58] Well, that's certainly not a black and white answer. I'm just wondering,

[01:23:01] **Zak Stein:** directionally, what would you hypothesize? So directionally, there's this thing that we talk about with, like that book Exit the Silicon Maze and the David J Temple work, where we talk about what we call the eye of value. I think we spoke about this last time, right?

[01:23:13] So you're looking at a tree. You're looking at a tree with your physical eyes, right? And with your physical eyes, you can see it all the leaves and the roots, and then actually your physical eyes, if you with a microscope, would show you all kinds of stuff inside the tree. So there's the eye of the physical eye of the mind.

[01:23:29] Let's say this is like an old, like, basically like a, like Thomas Aquinas type medieval framework, but it's very useful. Heuristically, I the mind would allow you to think through and model the tree. Like, oh, photosynthesis, like, ah, oh, there's like a circular thing with the water and the sap. And so like the eye of the mind, but what is the tree worth?

[01:23:50] What is the value of the tree? What does the eye of value see? The tree to my eye of value, especially big, old, beautiful trees, registers to my eye of value as extremely valuable in a, way that's hard to articulate in a way that I would almost give it as much respect as a person. Now, if you said to me, you kill this person, you'd chopped down this tree, I would cry and I would chop it down the tree, right?

[01:24:17] But that said, my eye of value sees these huge old growth trees as kind of inviable right now. There's another way to see the value of the tree, which is as $600 of lumber. And therefore that's a different perception of the value of the tree, which is the dominant perception in our culture, which is a truncation of the eye of value, which is actually kind of anti value, which is you perceive the tree for what it is instrumentally worth to you in the context of our society.

[01:24:45] **Nate Hagens:** So this gets to Daniel's, narrow boundary, wide boundary wisdom and, ecological connectedness to the web of life and just kind of the wide boundary realization Of, of our place on this planet. Yeah. that sort of ethos. Totally. I

[01:24:59] **Zak Stein:** mean, the, some of this comes from conversation I had with Danny once where he was like, we should write a paper where we say that a tree is worth however many, hundreds of trillions of dollars.

[01:25:08] Like if you actually tried to like build a technology. That does all the things a tree does, which is actually a incredibly complex Yeah. Almost un listable number of things depending on where it's nested in an ecology. Yes. The ecosystem functions correct. It would be unimaginably expensive, and yet we just fucking chop it down for $600 of lumber.

[01:25:30] So that is a distortion of the perception of value. And so what people have who, see what I'm seeing clearly with the machines is the ability to perceive

the value of, the human clearly and the machine clearly. So the question isn't, do the machines bring something valuable? absolutely they do. What does the nature of that value do the mach, do the humans bring valuable things?

[01:25:51] Yes. What's the nature of that value? So the ability to see something for what it's actually worth. Which has a lot to do with the ability of clarifying your own desire. Right. So clarified desire is value, which means what do you really want from this tree? I. And what are you bringing to it? so it's a, it sounds a little woo but that example is the clearest way to, to get to it.

[01:26:15] And of course with humans, like if you see a baby in danger, no thought, you just save it unless you're a very unusual person, right? So there's a intrinsic perception of absolute value

[01:26:28] **Nate Hagens:** of personhood. So there's a circular thing going on here because what this requires is a change in our values, but the values require a change in our education to have these wider boundary.

[01:26:44] You go out with someone into the woods and learn stories, and then on the way back you have a conversation with them about ai. So we need education to change our values, but the education system itself is being, infiltrated by this other machine value system. Yeah, and the key thing to get here is that

[01:27:03] **Zak Stein:** when we talk about changing values.

[01:27:06] Modernity and especially post-modernity gives us the impression that would be an arbitrary change. That would be the result of some power asymmetry. Meaning that there is no way to actually perceive value more accurately than the next person values and arbitrary conversation like we can look at the tree and I can tell you it weighs two pounds and you tell me it weighs 2000 pounds and you'd be correct and I'd be wrong.

[01:27:31] So we're we agree there that with the eye of the sense that it can be arbitrary or non arbitrary conversation and it's a non arbitrary, I mean there's a right and a wrong clearly,

[01:27:40] **Nate Hagens:** but our entire culture now just has one definition of value. It's how many dollars are yen or euros, something is worth.

[01:27:47] Correct. Yeah. That's the simplest

[01:27:49] **Zak Stein:** form of value theory, which means that we have a paucity of language and perceptual capacity with regards to seeing value. Which means that we think if you switch the values in the school from this values to those values, like what's, the difference? How do we justify the difference?

[01:28:04] What I'm saying is that there's actually non arbitrary conversations we can have about values. I'm a value realist. Thereby meaning that the way we think about this isn't, well, I'm gonna replace my values with your values, and they're equally as arbitrary, but I win. Ha The argument here is just like science, we're gonna come to a shared interest, objective understanding here, which will require mutual education in relation to the world.

[01:28:28] so this is not about a particular set of values, it's about a. The conversation concerning value per se. Changing towards one in which we could have non arbitrary conversations just means real reconciliation and real mutual understanding. So this is a deeper issue about like, oh, this is part of the meaning crisis slash meta crisis is the closing of the eye of value and the assumption that all of our value preferences are arbitrary, which is why, who am I to tell a kid what's a better or worse outcome of socialization?

[01:28:58] Who am I to intervene to stop the AI chatbot interaction? 'cause that's just my values. Like maybe in the future the values will be different, and in other cultures the values are different. So where do I really stand with my teacherly authority? That's a, novel problem in postmodern culture, and it's disabling our ability to claim.

[01:29:19] Legitimate teacherly authority and therefore we're ab negating that responsibility to the machines. 'cause we can't see clearly what's

[01:29:26] **Nate Hagens:** at stake. If you were my philosophy professor in college, I think I would've just squeaked by with a B minus. And that's only because I would

come to office hours and bring you an apple and kind of befriend you that I'd welcome that.

[01:29:38] And one thing that I noticed though, that I do use AI for, or a form of ai, and I wish I could do it right now, is in your little, last segment, there was a bird in your background that I couldn't identify and I would've used my Merlin app to tell me what kind of bird that is. Yes. That's a great example of an awesome use.

[01:29:56] Lemme ask you this. Is it too late in some ways? And is it possible that AI writ large will automatically create antibodies, on the internet and in educational institutions that downregulate conversations and warnings like ours? It's a great question.

[01:30:13] **Zak Stein:** I wouldn't be saying this if I thought it was too late.

[01:30:15] I definitely don't think it's too late. Fair enough. again, the, human nervous system is really malleable, which means you can become addicted to something, but you can also become un unaddicted to something. And so the idea that there's a generation who've been addicted to ai, I see that as a generation that has an initiation to deal with before it comes into adulthood, which is the dicing of themselves to that.

[01:30:41] that's well said. And they will be very powerful. Those who do that and the ones who don't, will not be. And so that's a challenge. Yeah. And it, it's a challenge that we, they didn't sign up for that, that we have generationally given them. and so in that sense, I know from a human development perspective that there are very few things which gets you in kind of like a.

[01:31:04] Unescapable downward spiral. There are some things, but there are other things which, you know, some of the most profound and wise people I've ever met, were used to be alcoholics. and so there's something actually about seeing how helpless you are in the face of something like a technology, a technological addiction that can, if you process it, will make you a more mature person.

[01:31:29] So, so there, there's something here about can the adults create the context where the kids can, come to do that? or will the adults continue to try to

get out of taking responsibility for what they're doing in court, which is what the adults are doing now? which is also just, that is an educational lesson.

[01:31:47] The lesson is if you are a wealthy technologist, you try to get out of taking responsibility for hurting kids. interesting message to send guys. I. And my preference would be that the kids perceive the adults as more responsible, and specifically that the kids perceive adults as interested in protecting kids.

[01:32:08] Right? Which would be what you'd want from the most powerful companies in the world. Like why would you not want to be perceived by children as protecting them, but instead in court? Try to argue in ways that get you out of being responsible and out of regulating things that are demonstrably hurting children.

[01:32:24] I don't know how to relate to that as an educator. 'cause educators are mostly concerned with how the Atkins of adults are being interpreted and understood by children. And so we are very systematically betraying the youth. it's a long conversation. It just includes a whole bunch of the structures of schooling, student loans and other things which send the message of.

[01:32:48] You don't have the right to be here except insofar as you could be instrumentally useful to the adults, which is the opposite of what a parent says. The parent says, you are a hundred percent supposed to be here and will take over the show after I am gone.

[01:32:59] **Nate Hagens:** What percent of educators, let's just say across the United States, are, would you guess are aware of and agree with what you've presented here today?

[01:33:09] I would

[01:33:09] **Zak Stein:** say the majority of teachers would agree, like the vast majority of teachers would agree, that many administrators and superintendents would agree, but would also know that they're somehow have to let it in. I think to me that would be the thing. And then there are other that either because they realize they have to let it in so they feel like they should embrace it, which is kind of like being Stockholm syndrome by the, tech companies.

[01:33:40] And then there are techno optimist educators. Absolutely. There is a bunch of educators who are actually. Hearing what I'm saying and being like, yeah, but we're gonna avoid that outcome because we're not gonna use the deep anthropomorphic ai. We're gonna do amazing shit with ai. So I don't wanna squelch actual, but you have to get your design principles really right.

[01:33:57] So my sense is that the people who love kids and interact with kids all day and are worried about kids would be worried about this. Yeah. if you relate to kids as some abstract thing out there and you relate to them as users and you relate to them by the tens of thousands. Then that's a different type of calculus, right?

[01:34:18] like if one kid commits suicide because of a chat bot, should we really stop all these other kids from having access to the chat bot, which is what basically they're saying in court, to which my response is yes, because the death of one child is completely unacceptable outcome for a technology that did not have to go to them.

[01:34:33] It's not like a medical technology. It's like, oh, the kid's got leukemia. It's experimental treatment. no. this is not that. This kid didn't have to interact with that. It was, a, so you could see I'm upset because this is what responsible adults do. When children are put in danger by other adults, they get upset at the adults, not the children.

[01:34:50] And so, yeah, this is, just me more of my soapbox, but I mean, literally this, legal case is unfolding right now in Florida, and, if they give personhood to chatbots, it's gonna open up a world of pain, and a world of insanity. I. And they're doing it not 'cause they believe actually that they're a personhood.

[01:35:11] They're doing it primarily to protect their corporate interests, to continue to distribute this incredibly, popular, deceptive

[01:35:20] **Nate Hagens:** technology. So, so what can individuals, coming across this conversation who care about the risks that you've described today do about this in their own families, their own communities?

[01:35:33] So I think we can

[01:35:34] **Zak Stein:** already take the steps to protect the youngest kids from screen overuse. it's a matter of. Some more attention being paid by teachers and educators. so that's the simplest thing. The younger the kid, the less time they should be interacting with any kind of technology. And like, if you go back in history in terms of technology, that's the way you should introduce it.

[01:35:54] Like pencils, paper, well first rocks and sticks, and then pencil, paper. And then maybe they listen to something like a story like through the radio. Then maybe there's like a long form TV thing where it's like a half hour show or something. it'll be much, much later that you would give them even the possibility of accessing something like TikTok.

[01:36:16] so that would be the first thing. Just think about it very carefully. Imagine it's like alcohol or a controlled substance and treat it that way. Now this is obviously means you're gonna have to roll back. Probably most parents have to roll back the permissiveness they've had with the things so far accepted in rare communities.

[01:36:34] The other thing would be find community. It's almost impossible to do it if you're the only parent doing it in the school. so that's one of the real problems is that, and then the school has to change, the school has to echo the parents in talking about that these are bad and enforce the regulations they set on campus.

[01:36:52] **Nate Hagens:** But you're pretty confident that this broadly is already right now, in early May, 2025, a super majority concern. I believe so,

[01:37:01] **Zak Stein:** yeah. Meaning like, I think anyone confronted with this except people with a vested interest in continuing the success of these technology companies would be like, of course, like kids shouldn't be interacting with these crazy things.

[01:37:12] Like I'm not saying you can't go on YouTube and watch cartoons or go like, I'm not saying that. I'm just saying Right, right, right, right. Like, don't let it interact with these uncontrollable, quote unquote conversational agents, which have been shown to be damaging both psychologically. And to produce content that actually drives kids to self-harm and, sexualization and a whole bunch of other things.

[01:37:34] So I think most people would say, yeah, set an age limit there. I think at this point, mostly people would want age limits set on social media, period, like which Australia did and has been experimented with at scale, just like they did with porn. So to me it's, a no brainer to do it. the more complex conversation is the college age kids and the adults, because they're free to do what they want with the technologies that are on the market.

[01:37:58] And if they want to cheat, I. They can, will they perceive it as cheating? Will they say it as actually damaging their future self by becoming illiterate and inarticulate? Or will they see it as getting ahead?

[01:38:12] **Nate Hagens:** It gets to the question of why do you go to college? Is it to get a degree and have fun and get a job?

[01:38:19] Or do you go to learn? And for those people, like myself, I had 180 credits in four years. I only needed 120 to graduate. I was taking classes left. Right. 'cause I wanted to learn Totally. and, sometimes I didn't study at all until the week before the final. that's how I rolled. But there are some kids that are really curious about the world and they will want to learn.

[01:38:43] Correct. but yeah, this is, there's a, self, you know, what, do I want in my life sort of thing that at 18, 19, 20, you should start, be able to answer that. You should. And it is hard to answer without

[01:38:59] **Zak Stein:** a

[01:38:59] **Nate Hagens:** lot

[01:39:00] **Zak Stein:** of. Training in the eye of value.

[01:39:03] **Nate Hagens:** what about, peer like designated drivers, were a thing when I was, 17 or 18?

[01:39:10] Well, 18, when you were allowed to drink. dad. the, but, the same thing with ai. is it, would it be much easier to be friends with a group of friends that, have the, chatbot, abstinence, pledge? That's what I'm saying, like,

[01:39:30] **Zak Stein:** community is essential. Okay. So like Waldorf schools, other schools that have a school-wide policy about tech use Yeah.

[01:39:39] Allows, parents at home to enforce that and then they go to a friend's house and they get that reinforcement. And then the whole community Yes. Helps the kids. 'cause if you have your kid and you're like, my kid doesn't watch the screens or whatever, and then they go to Bobby's house and at Bobby's house, there's screens everywhere.

[01:39:54] Both it's bad for them whether they're there and they come home or they're like. Really, it's like going, getting sugar and coming home to a house without sugar. Right. So it's like, it's much easier if they don't have these things around. And so that means, yeah, you do need buy-in from other parents who will echo your sentiments that there's dangers here, and then you need to, as an adult model, good screen use, which means like, don't be on your screen all the time in front of the kids.

[01:40:20] yeah. Take screen sabbaticals and help them be off their screens and, a whole bunch of other stuff.

[01:40:25] **Nate Hagens:** Yeah. I mean, it's a Sisyphean task, but this is the task. It is. It's, yeah, it is. And again, the, there's a lot that's been

[01:40:35] **Zak Stein:** capturing aspects of the domestic sphere, right? So this is part of that, part of, you talked about the kind of notion of colonization and there are some notions of like the colonization of the life world, meaning basically like the incursion into domains that were not subject.

[01:40:56] Two markets and technologies, the encouragement into those places like socialization, parenting, teaching, and then bringing in technology and marketization. And there's reasons to be really worried about that. and again, this steeper issue is that it can undermine, I think, the ability to understand yourself as a member of the same kind of moral species as your elders.

[01:41:27] This is what's says, like you said, it, like there's a dehumanization. And the radical thing there is that there will be a generation where their primary interactions are with machines, not humans during the ages of growing up. And so

the question is, how do they understand themselves as the first generation in history raised primarily by machines?

[01:41:47] What's the nature of their self understanding and do they understand themselves in the same moral universe? Or have they been without permission, removed from the moral universe in which all humans previously lived. and that to me is, sounds like almost an existential risk because it's a speciation event.

[01:42:04] It says basically with changing. So fundamentally the nature of socialization that the thing that's the outcome years later is a different kind of thing. and that's I think my biggest concern and the thing that you mentioned before is that at first it will look awesome and actually be successful.

[01:42:23] Is the case that this is a type of risk which is invisible? meaning at first it will not seem at all like anything bad is happening. It might actually seem awesome, like more people get in therapy, like less kids burning themselves on the stove because of domestic robotics and like all of this stuff.

[01:42:41] and it will take some time to realize what has been lost.

[01:42:44] **Nate Hagens:** So. Thank you. I know you're spending a ton of time on this and that you will share some of your writings and resources, on this important topic since this is your second time joining me on the show. And I just looked, the first time was almost exactly a year ago.

[01:43:03] It was May 8th, 2024. Wow. So instead of asking you my usual closing questions, I'm asking my repeat guess if anything about your work or your world view or perspective on what's happening in the world has changed since you were last on the show, and if so, what? Interesting. I mean, this issue, which you mentioned on our first conversation, I

[01:43:29] **Zak Stein:** mentioned, but it, has, i, didn't realize the speed at which the risk would accelerate.

[01:43:34] I mean, I probably should have known, given all the talk about exponential curves and stuff, but at the same time, I believe this, Has occurred in a

very serious way. So I think that has me thinking a lot about the types of arguments and strategies that would actually be useful to, to somehow stop this.

[01:43:52] so I've been that. So I went from thinking this would be a problem. I kind of articulated a problem to see that, oh, the problem's just, we're not waiting for that to happen, that's happening like, like right now. And to think, oh God, what can actually be done?

[01:44:05] **Nate Hagens:** What percent of your efforts are directed towards this question and, risk more broadly?

[01:44:10] **Zak Stein:** I mean, in terms of like my discretionary kind of like scholarly reading time correspondence type, all of it, you know, and then I have other things that're ongoing projects that I've been working on. Yeah. And again, at the Center for World Philosophy and Religion, you know, we're philosophers doing theology and stuff, but we've pivoted to focus specifically on this question because there's, no other more important question than how do we preserve the human in the context of the rise of artificial intelligence.

[01:44:36] This was Kissinger's key question in his book Genesis. Basically, he's like. If we don't know how to talk about what's valuable in the human, it will just be supplanted by the machine. And so there's this desperate conversation to articulate clarity about the intrinsic value of personhood and separate that from the value of what the machine brings.

[01:44:58] and so, yeah, in that sense, you know, there's been a lot of work on this. Now of course there are other risks associated with AI that in some sense are kind of scarier and freakier. Yeah. and so. Because I'm an educator and psychologist. I've focused on this one. But, you know, I have colleagues who are working on, you know, much scarier versions of the fact this thing can't be controlled.

[01:45:20] Like I'm talking about the fact you can't control what it says you're a kid. But of course, there's this super oriented issue of what happens if you can't control this.

[01:45:28] **Nate Hagens:** we can't do everything. we each have to specialize. And I'm happy that you're, you, and your team are working on this.

[01:45:34] Thank you so much, for your, concern for human children, and the future and your time today. Just outta curiosity, Zak, you were a, renaissance man and, know a lot of things. If you were to come back in another year or so, can you speculate on, what topic, that you are passionate about that is relevant to human futures that you might, be willing to take a deep dive on?

[01:46:02] A related subset of this question

[01:46:04] **Zak Stein:** just has to do with. Technology futures in education. So I laid out this vision of the educational hub network, but that was done, you know, that's like a back of a napkin kind of sketch. Like there's a bunch of very real thinking here to do outside of diagnosing this problem and into, okay, what are the design principles for responsible use of AI in education?

[01:46:25] And I've done a lot of thinking about that. That's where I need to think next. We need to slow the thing down, put the age limits in place, and then start really thinking about how to deploy this stuff in a way that would actually solve probably the most significant educational crisis in history, which is the meta crisis.

[01:46:42] Like the only way outta the meta crisis is somehow scaling

[01:46:46] **Nate Hagens:** human capacity. Some portion of LLMs and AI could be directed towards that question. and those answers

[01:46:54] **Zak Stein:** yes. Directly. Yeah. And so I've got some writings, which I'll try to link you to where I lay out design. I. Parameters, like, you know, is it safe for the nervous system?

[01:47:03] Like is it going to interfere with human relationship or deepen human relationship? Like there's some simple stuff which we just have never designed with those incentives, but as soon as we start to really design towards those incentives 'cause we're incentivized to, then there could be incredible breakthroughs that, so again, I, and I don't wanna sound like a tech optimist either.

[01:47:23] I'm basically saying we need to really think, especially with regards to the youngest people, but I'm also hoping that there's some type of breakthrough which allows us to do enough learning, fast enough to navigate the meta crisis. And that's

going to involve synthetic intelligence. It's going to involve certain amount of cyber organization.

[01:47:45] So yeah, I just kind of lean into that future and the more clarity you have about what the human is and what is valuable about the human, what's valuable about the natural world, which is the more you have the eye of value open, the more you can trust yourself in engaging with the technologies. 'cause you know, what's at, stake, what's being protected and what is or is not valuable about the machine that can or cannot be found in the human right.

[01:48:07] So that's the other thing I think. Yeah. That, seems to

[01:48:10] **Nate Hagens:** be what comes first. Yeah. Precisely. Zak Stein, always a pleasure. I feel a little carsick after our conversations, but I learned a lot and I, share your concerns. Thank you so much, for your work on these issues.

[01:48:24] **Zak Stein:** No, thank you, man. I will, yeah, I'll be glad to come back in a year and hopefully talk about how all the things I said have been made.

[01:48:33] Law and all the kids are safe up in my house.

[01:48:38] **Nate Hagens:** Talk to you soon, my friend. Talk to you soon. Likewise, if you enjoyed or learned from this episode of The Great Simplification, please follow us on your favorite podcast platform. You can also visit The Great Simplification dot com for references and show notes from today's conversation.

[01:48:56] And to connect with fellow listeners of this podcast, check out our Discord channel. This show is hosted by me, Nate Hagens, edited by No Troublemakers Media, and produced by Misty Stint, Leslie Balu, Brady Hayan, and Lizzie Sir.