Your Questions Answered - Bret and Heather 71st DarkHorse Po...

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**SPEAKERS**

Bret, Heather

**Bret** 00:09

Hey folks, welcome back to the Dark Horse podcast live stream number 71 QN a m A in the DNA.

**Heather** 00:21

So I wanted to say something but I thought about saying it in the main livestream, but I forgot. That is actually the birthday week of all four of our conference here and you can't see Maddie at the moment but she's lying on the floor here and beneath us between us. And we actually know her birthday. Her birthday is tomorrow. Yes, she is going to be eight Maddie

**Heather** 00:44

is we knew her father did know her father sailor sailor,

**Heather** 00:47

and he was quite a sailor dog. He was. And Tesla the dark. The dark Kitty in the background is 10 This month, and the two youngers or two this month. They're not littermates but they're both they're from my feral cat colony in Ashland, Oregon. So it is it is all their birthdays right now.

**Bret** 01:08

It's amazing. Yeah,

**Heather** 01:10

you're unimpressed. But

**Bret** 01:11

well, I don't believe they know their names. And I, I'm fairly certain they're unaware of the birthdays. Sorry.

**Heather** 01:24

The only reason to talk about things is if they're conscious of you talking about them?

**Bret** 01:30

No, it's not like that. I just, I don't know. It's awesome.

**Heather** 01:39

All right. Here we go. This, we're just starting with a few questions from last week or the discard question. And then questions from last hour before finishing off with questions from this hour. Hi, you beautiful people. So who's going to illustrate that Dr. Weinstein original in reference to the loose the Seuss poem, I can imagine it already. I love this new outlier, academia Cathedral and I'm proud to be a stone amongst cornerstones. May forums abound.

**Bret** 02:05

Yeah, I mean, let's put it this way. I would love to see that thing illustrated, but there is no part of me that imagines that that is a minor task. Right? So anyway, yeah, I would love it if somebody was was up for it. And I you know, as I was writing, and I certainly did think about the imagery that would go along with you did, sure. Yeah,

**Heather** 02:26

I don't I actually, I don't know how you write poetry? I don't mean, I don't know how you write poetry? I mean, I don't know how you write poetry?

**Bret** 02:31

Well, in fact, as you know, I mentioned on the last week's live stream that it was a very quick process, you know, there's hours and hours of like, going back and tinkering lines and things like that. But the basic thing emerged very rapidly as to the first significant poem that I wrote. And but

**Heather** 02:51

as it was emerging rapidly, you were visualizing it, you're imagining what the illustrations might be.

**Bret** 02:56

Yeah. Yeah. Because in some sense, I'm,

**Heather** 03:00

you know, that actually surprises me a little bit because you're so you're so auditory. You're so sound based.

**Bret** 03:07

Yeah, I mean, there's definitely something to that. But on the other hand, I think, you know, I mean, the poem itself alludes to the fact that Seuss is lodged deep and all of our minds and so there's something you know, he built a kind of visual language. And it is difficult actually, in some ways not to imagine what Seuss you know, encountering that poem, what the visual language would say about it and so you know, wasn't like everything add an image but but yes, a good many of them did. So anyway. Yeah, I would love to see it. I would love to see it.

**Heather** 03:45

Okay, the second question from last week is again a comment, which I think you pulled up a visual for this one is this meaning this podcast is like, if Shaggy and Velma got PhDs and started a podcast

**Bret** 03:59

that you want to put up shagging Velma. Alright, here they are right now. I just think

**Heather** 04:04

I just think this guy needs a haircut more than you do.

**Bret** 04:07

Yeah, right. No, I think this comment is is is just a little unfair because I you know,

**Heather** 04:15

I actually i just i don't know i i'm sure i watched Scooby Doo a couple times, but I was I don't know the characters well enough. I I don't have a deep

**Bret** 04:24

knowledge. Let's put it this way. I mean, I think Velma is more on target for you. If he's, you know, adventurous, a little bookish, you know, it's not way off but I just think you know, 10 times lovelier than Velma, as lovely as she is. And you know,

**Heather** 04:46

you find what's his name? shaggy? A bit of a smell.

**Bret** 04:52

You know, I just, I just, you know, I don't know, I, I wasn't sure what to make of Okay, it wasn't fun. Yeah.

**Heather** 04:59

And yet, and yet here it is. And yet I read it to you laughing last week and you said, What? And then you found this image and you said you didn't read it as I think you wanted me to know. So here we go. Yeah. Okay.

**Bret** 05:10

Anyway, I just thought I'd mentioned because actually, I do think there's something very incisive. Yeah, idea of them having gotten PhDs and started a podcast. It was pretty fun I wanted to highlight.

**Heather** 05:23

Next question, I recently got my master's from an Oxbridge college, just after racial bias training became mandatory for current and future students. is a PhD worth the personal cost of speaking on truths?

**Bret** 05:36

Well, you know, this was a tough one, I have been saying to our children, that in many ways, I don't think I could do what they must now do living in a world in which untrue deserve. So regularly deployed and with such such force behind them. So I don't know what to make of this. Because obviously, there is a logic about living to fight another day, this is something that took me a long time to understand, but you know, there's only so far you can go with that. And then the other thing is, if you decide well live to fight another day, has to be the key rubric. Because if you're going to accomplish something, you have to accomplish that first.

**Heather** 06:22

That's like the second half of visits, the hell you want to die on, right. And even if those don't emerge from the same thing, it's, it's definitely you can definitely put those two ideas together and make them saying,

**Bret** 06:32

Yeah, they they, they are closely related. And the problem is,

**Heather** 06:38

this isn't the hell you want to die on, then you're gonna live to fight another day.

**Bret** 06:41

Right? If the person asking you if that's the hell you want to die on, is also holding a weapon. It's a very different thing. And so yes, the, the problem I would say is, you know, none of us gets out alive, there probably is a hill you fit, therefore be willing to die on, right? There are important things in the world and you the preservation of your well being is not ultimately viable, especially if you are part of a society that is committing obvious suicide. Right? So the hill to die on is somewhere, and we all ought to find that hill. I don't know what to do. You know, I have almost no doubt that I would not, I mean, I barely survived the Ph. D. program we went through at the time, and this was not a component of the problem. So wasn't there? No, it wasn't there. There were lots of other problems and my, you know, instinct to go after things that aren't right. definitely got me in a lot of trouble. But it was scientific trouble. And, you know, kind of proud of, I think the fights I chose were were good ones. And I would still think that even if I hadn't, hadn't finished but but nonetheless, I don't know what advice to give people going now, because on the one hand, the institutional structure is so broken, that it's not obvious to me that having the degree and therefore the authority or having the training, and therefore the knowledge is all that valuable in and of itself, because the programs are delusional in the first place, for the most part. So

**Heather** 08:20

well, there I mean, that will obviously vary to some degree by discipline. And the problem more widely is, you know, if this person says, mandatory for current future students, it's not clear if in this question, racial bias training is mandatory in this field, you know, for for that department. Yep. Or if it's college wide, yes, increasingly, these things are becoming college wide. And we saw evidence, you know, we saw yet more evidence this week from a couple of terrific piece is one written by Barry Weiss, one written by Caitlin Flanagan, on what is happening to secondary Ed, especially the elite private schools, and you know, it's whole institutions, they're falling to this thing. But presumably, the world does still need chemists. And you know, like, so I figured that art which we need, will fall completely as a set of disciplines sooner than this, then the STEM fields will, because airplanes will start falling out of the sky and bridges will start collapsing.

**Bret** 09:28

Well, but I mean, in some sense, this is my point is we do absolutely need these things, not optional, and you cannot do it in a world where your relationship to the truth is held to be facultative as a matter of your survival. Therefore, we are facing an existential crisis. And that does not mean that it is clear that if you go into the field, that ultimately things sort out the question is, is it necessary if your point is actually chemistry is Very, very important that we have to remain clear headed about it. Then the point is maybe that has to be fought outside, if you go if you go into the thing that it owns and therefore can force you to accept fiction

**Heather** 10:12

that it worked out or not it chemistry, correct

**Bret** 10:15

chemistry, having surrendered to wokeness. And I can speak less about what's going on in chemistry biology API. Yeah. But biology literally has right. Otherwise there would be an uproar amongst biologists saying, actually, that's that nonsense that you're peddling over at Scientific American about us having gotten past the sexual binary is nonsense. And you know,

**Heather** 10:34

no, and you get people who can legitimately say, how can you claim that sex is binary, when all of these researchers and scientists and pediatricians and such say the other like, well, I can't explain them. But that doesn't make the bright. Yep.

**Bret** 10:49

So what you know, this goes back to the idea of zero being a special number, right? To the extent that there are not programs that we can point you to where the chemistry is free of wokeness. That tells you what battle we're involved in, we're battle in the battle in which there can be no program in which chemistry is not afflicted by wokeness. Because if there was, it would obviously be the top program. And therefore, if if the outsiders can race to the front of the race, just simply by not being crazy, then the point is, that cannot be allowed, which is actually the point we go after merit, right, which is quite viewable in the attack on substack. This week. So there are now calls to I don't know, this substack sensor, it's journalists. And the point is, well, we can't very well have a game in which all of the mainstream outlets have to say these crazy wrong things. If there are a bunch of people who are liberated to go to the audience directly and say true things because of course, they will be the only game in town. So how can they not be the only game in town? We're gonna have to be platform.

**Heather** 11:53

So I didn't, I didn't know that it happened. I met with the two founders of substack, a few years ago, back before really almost anyone had heard of them. And they were, they came, they flew up here to talk to me about whether or not I want to start one. And I was thinking about and I ended up not, and I and I still don't have one, as you know, but I specifically asked them I think this was right after the kerfuffle with Patreon over Sargon of akkad. And I was thinking, Okay, maybe not Patreon, maybe substack. I tend to want to put out more written content anyway, then video content. And I was really impressed with with these two guys, but I asked them specifically what what will your policy be in censorship space, and they didn't have a lot, but they had just a tiny bit. And, you know, I felt it was it was not that that is the reason that I didn't end up creating a sub stack I didn't want at that point. We I think we had maybe just gotten our book contract, I didn't want to feel confined to be writing something on a regular basis for that for a different audience. But I remember the three of us having a conversation that I think was was good on all fronts in which I said, you will, you will want to be very clear upfront with this because it will come for you.

**Bret** 13:09

Yes, it will come for you. The question is what do you say because of course, you don't want to set up a policy that allows people to put truly dangerous possibly illegal whatever it is, so you need to set up a rule that explains how discretion will be wielded and what will be protected. But that you know, I don't envy anybody who has to write that policy and then face the consequences it's not a simple matter.

**Heather** 13:34

I agree. So all right. Do mammals regularly physically discipline children? If so, does it suggest evolutionary utility or cast doubt on quote negative reinforcement never works?

**Bret** 13:50

Do mammals physically discipline presumably their own children? Yeah. on human mammals, physically discipline their own children is presumably the question

**Heather** 13:59

yeah, the only example that comes to mind is male lions cuffing cubs who were playing on them when they're just sort of fed up I mean, like, leave me alone kid. And but that's not that's not a there's nothing abstract about that. It's not a I saw you doing something that requires discipline. It's like you're sitting on my head and I wish you wouldn't I'm going to get you out of here.

**Bret** 14:23

Yeah, I think it's a very good question. I agree with you I struggle for any example other than that one and other analog as you know, probably you'd find the same in hyenas but it's not a different races mechanics probably. Yeah. But I think part of the answer is that there's a reason for it. And I'm actually goes to what I have frequently said about school, that school as a supplement, right, and that the fact of school being a supplement is the result of the fact that we live in novel circumstances where supplements are necessary, right? hunter gatherers are not an educator hated what they are, is educated by the intersection between watching their immediate ancestors, their living ancestors do the job that they do in the world, and, you know, following suit. So the point is the world trains you properly, you don't need to be scolded. So imagine, imagine the following example, imagine that you are walking down a sidewalk as a child, and you are not paying attention to your trajectory being straight. Right, there is a very abrupt place at which the world becomes fatally dangerous. And the possibility of straying over that line absent mindedly does not mirror many things in nature. Now, there are Cliff edges, but you are actually well programmed to appreciate the hazard of them rather than, you know, a six inch drop that could get you killed.

**Heather** 15:54

I do think these are two different things, though. And when we address both of them in our books, so this idea of discrete hard borders that, you know, Cliff edges, and to some degree water edge, being the closest analogue, but things like the garbage disposal, the curb, the swimming pool, right? Where in all of those cases, there's nothing that begins to give you a sense of the encroaching danger. Yeah. And Cliff edges, maybe a little bit, but even most natural bodies of water, give you some indication, like it's getting, you're sinking into the earth more as you get close, something like that. Right. But then this question of, you know, what do you need to be schooled in? Is, I guess it's there's an overlapping thing there. But it's but it's distinct in that there's not only is there I mean, this is specifically about punishment, and maybe schooled and scolded, maybe they have actually etymology, in common, but not only is school, almost unknown in non human animals. But schooling in school is almost unknown in humans, aside from modern environments that are informed by weird Western, educated, industrialized, rich, democratic countries. And in fact, there are lots of examples of people who are doing really detailed high skill things, where the stories that they tell are, of course, I wasn't schooled in this, you know, here's an example cut. There's one, one thing we cite in there, I can't remember, I think it's one of these. Maybe it's these Japanese women, abalone divers, and maybe conflating two stories here, in which the anthropologist is saying, so you learn from your mom, she's like, no, I learned from my mom, my mom cuffed me and told me to go away and said, I had to learn this on my own, there was no way I learned from her. And so yeah, there's an actual, like, antipathy towards schooling and towards instruction in not just most species, but where it could possibly be being happening, but also in many human cultures?

**Bret** 18:02

Well, I agree, but to draw the connection about why why I see the parallel in here is that to the extent, so when I scold one of our children, I am effectively if I'm doing it, right, I am speaking for their future self. I am, I am chastising them so that they will learn a lesson that their future self will be glad that they have learned. And my point about animals, mammals other than people, is that in some sense, the willingness so I am also borrowing from my authority as a parent, but the alignment between the parents view of the world if you imagine a Jaguar at the edge of a cliff with a with a cub, the cub has every interest in just simply modeling the state of mind of the adult and taking it on. And so as that parent becomes wary, because the cliff is a hazard. My guess is there's an almost seamless transmission of this is my opinion of this. And this should be your opinion of this rather than the attempt to escape authority, which is a more complex in in humans, but so something like that. I do think that there's there's an analogy.

**Heather** 19:21

Yeah, that's good. One more question from last week. Are there any health benefits to kombucha? Or is it just a trend? I like it, but how effective are the probiotics in preventing illnesses? I don't know the research, but I have the sense that it like other formats are useful. to varying degrees depending on the brand and the age and all of this and your particular health, at helping you maintain and maybe helping you establish healthy gut microbiome. And I will say that I, my very first kombucha was at the invitation of Joe Rogan in his studio when he was still in California the one time that we did Joe Rogan together as we were leaving, he said, Hey, do you want to kombucha for the road and I thought for the road, had a kombucha I think I'll have one of Joe Rogan's very nice very cold computers and I did I have a fan ever since. Yeah,

**Bret** 20:23

no, I have actually I had the one I got from Joe's fridge. I've been drinking it very

**Heather** 20:28

savory, and that one has ever lost value.

**Bret** 20:32

forever more value, depending I mean, it's a it's a it's a living drink. So but yeah, so I don't know about Kabuto. In particular, yeah, I do have the anecdotal sense. So longtime viewers will know that I had an issue with asthma which largely almost completely, like 90% went away with my elimination of wheat from my diet. To the extent that there's any residual I actually find certain things are very effective one hydration, number one, and second is fermented foods, such as kimchi and sauerkraut, and kombucha. Yes, although I haven't, I can say that I have detected the difference with Sauerkraut and kimchi. I have not actually tested the difference with kombucha but my guess is it works similarly.

**Heather** 21:24

Yep. Okay, discord question for this week. Are we meant to stay? Are we meant to stay awake? My computer is not meant to stay awake. Are we meant to stay awake for a long period of time then sleep for several hours? Or is this an unnatural way of doing things that was incentivized to fit the nine to five work schedule? How did our ancestors used to sleep? What is healthy? And how do we know? That's a lot of questions. Yep. Did you have your start?

**Bret** 21:52

Well, sure. I don't know where you'll be headed. With this. I would say I think the evidence is good that during sleeping hours during our hours in which it's too dark to be productive out in the world, the evidence is not one long bout of sleep. But there's a pattern and natural pattern that involves waking up periodically. I will say that for my part. Anecdotally, I have the following experience if I wake up during the night, and make contact with the clock so that I know what time it is. And this is an unnatural circumstance clocks are unnatural, you know,

**Heather** 22:26

but you can look at the sky and see that where the moon is. Yeah, maybe if there isn't cloud cover,

**Bret** 22:32

etc. It's I think there will be a lot of my sleep becomes super regular out in nature. If I go backpacking,

**Heather** 22:37

I was just saying like, what are there ways that you could tell what time it is relative to when you thought you would be sleeping out in nature? Often, yes, not as precisely as

**Bret** 22:47

not as precise and not reliably so the moon could be obscured by clouds or whatever. But so when you do that, when I do this, if I make eye contact with the clock, let's say it's 230. And I make eye contact with the clock and I say, Ah, it's 230, I will very frequently be able to wake up with shocking precision at just about the moment that I had hoped to get up. And when that happens, one of the things we don't take seriously enough is the hazard of arbitrarily awaking sleep cycle. Yeah, yeah, good for you guarantee but but the degree to which one does not feel some awful burden of having to get out of bed, if you wake up naturally at the end of a sleep cycle, rather than arbitrarily in the middle of one is rather surprising. Yes. And so anyway, it is very good for me to have a moment of consciousness in the middle of the night that allows me to calibrate where I am. And then my assumption is that my regular clock, like functions in the mind, actually count down or something and result in me landing at the right moment.

**Heather** 23:51

I wonder, though, why? Why should it be more precise? If you wake up in the middle of the night, as opposed to coming down from if you know what time it is when you go to bed?

**Bret** 24:00

That's a great question. My and this is testable. I think one possibility is that there are processes taking place at different rates. And that partly our desire to be asleep all night, without a break results in a miscalibrated something because there's a natural break in the middle. But if you go if the last period before you wake up, is continuous, and it's how to calibrate

**Heather** 24:25

it's much more likely. And I've wondered this to you know, the different types of sleep tend to have no known periodicities but they have variance. And what I've never run into and this may well be out in the literature and presumably some sleep. Researchers researchers know this, but I just don't know what the answer is. is is that variance and periodicity. A population wide variance are also an individual variants, which is to say, like if during REM sleep, your REM periods for instance, tend to be 60 minutes long. Is that always the case or if you will, Wake up at 230 in the morning, and you know, you want to get up at seven. Can your brain go like, Okay, I'm gonna give him I'm not gonna be able to do the math because I picked difficult numbers. But you know, can can your brain say Actually, that's five and a half hours. And so I'm going to, I'm going to make those 65 minute, you know, REM periods rather than 60. And so get you up at, you know, five minutes to seven to do the math. But I'm not like, I'm not even sure if that's right. If it's all REM in the second half, then I don't remember exactly where all this thing gets gets divvied up. Like, you go, but I'm

**Bret** 25:37

sure do yeah, effect. I find very funny. The idea of, you know, if you got a lot of pressure sleep quickly, you know, yeah, and I don't mean for a brief period of time. I mean, try to pack it in or

**Heather** 25:50

pack it in. Yeah, that's right. Yeah. And yeah, I mean, there's a there's a ton to say here about sleep.

**Heather** 25:59

I don't know what evidence there is. But I suspect it is, it wouldn't be true, if there were evidence and it is would be true. And if there's not evidence yet that many people absent electric lights, and other indicators of urbanization do tend to sleep in chunks that aren't one one big chunk in the middle of the night, throughout the night. But I don't I don't know what the research is beyond like, like narrative evidence from medieval European peasants or something. It's like that's the thing I have in my head is you know waking up and spending an hour talking or something and then went back to bed. Maybe also in a wet and maybe there's 100 I feel like I know like bits and pieces of were like yes, people do this. But they're it's they're all like little examples that strike me as anecdote at the level that I can come up with them. Yeah. Okay. First question from this last hour. What is more likely? evergreen, naming a building after the two of you or 12 impartial jurors being impaneled, unafraid of the consequences of a show of an acquittal? What real peace can be brought from the public sacrifice of even a despised man? See john adams in the Boston Massacre? Yeah, I think it's more likely that evergreen names are building after us, frankly.

**Bret** 27:22

Yeah. I mean, it is. And you know, I tried to point this out early on as he did that, and it's, you know, not only is it very unlikely that jurors could possibly set aside the hazard. I mean, even, you know, well intentioned, objective jurors cannot be deaf to the fact that the consequences of exonerating Shogun could set the world on fire. And so anyway, yeah, people are human. And this is this is incredibly dangerous. But beyond just

**Heather** 27:59

to be clear, you were just you were trying to say, I believe, take out their own personal safety. If their answer, even if they are completely anonymous and protected, and there's no way to ever know who any of them are, the effects on the world will be something that they would have to live in and feeling responsible for. And in fact,

**Bret** 28:19

I think you can, you can detect this very thing in what I think is the only famous thing that Rodney King has ever said, Rodney King said, can't we all just get along? And you know, my recollection of that? I hope it's accurate. My recollection is that he was shocked and feeling responsible for essentially, you know, rioting taking place. on his behalf, right, his name, even though he never wanted that name. Right. And so anyway, I mean, I do think he his point was the right one, I respect him greatly for for what he for trying to step in and restore sanity. But the basic point is, yes, any rational person has to cannot put aside entirely the fact that terrible things could happen as the result of a verdict in this case. And the problem is that a the facts of the case are complex, to say the least. Right? And I said this on Rogen and didn't know what would happen, but the facts of the case are complex, which means you engage

**Heather** 29:33

john McWhorter in a conversation about this as part of your conversation with him last summer as well.

**Bret** 29:38

Yeah, that's true. But the necessity, right, what I what I fear most in some ways is the sense that the system will declare that he must be convicted, right and that it will convict him unfairly because some way in some ways the system will just register the grid. Good have not setting riots off and all of this as paramount. And the point is, you cannot have a system in which we suspend due process. Because if we don't suspend due process, people will bring violence to the public, right? You cannot have a system run by by those willing to engage in violence that is the beginning of the end. And so we must have a fair trial, irrespective of what happens downstream of it. And I'm not convinced that we will.

**Heather** 30:34

No, I agree. Just one more. One more point on this. You've seen these, these visuals, like pyramid of white supremacy, right? So it's like genocide is at the top. And things like being race blind there at the bottom? And the idea is that everything above something on the bottom level as built on everything that came before and you know, these are super divisive, and frankly, racist tropes that are now spreading, but I saw one this week that actually had Why can't we all just get along as part of the white supremacists pyramid?

**Bret** 31:08

marvelous? Well, yeah, starting next week, if ebron Kennedy does not respond, we will begin to build a framework in which being not racist is once again on the map and understood to be so I will help

**Heather** 31:23

I'm super not racist.

**Bret** 31:27

That's true. But this week, what is it? You know, we're just in trouble saying such things.

**Heather** 31:35

Where we're here we go. Greetings, professors, would you give any advice for an involuntary university student who withdrew in his late 20s, who is still haunted by a hunger for knowledge, and the guilt for not meeting his ambition of making an intellectual contribution? So I would one thing I would say is I don't the the idea that you have guilt for not meeting your ambition of making an intellectual contribution, based on the fact that you didn't finish college, there's a disconnect there, there. I wish there were more opportunities to make intellectual contributions that were easy, and that there were a route for some people that was clear, and that, you know, there is no clear route at this point. Because the one that we had is so broken, but there are plenty of ways to make intellectual contributions that don't actually require a degree. So I don't think you should feel guilt for withdrawing from especially a broken system. And imagine that that means that you are thus toward it.

**Bret** 32:38

Yeah. I agree with that. And I would maybe say more directly that, you know, speaking as professors, speaking as people who did, you know, in your case, you shine throughout the system, in my case, I made it through to, you know, to PhD top level, you can make degree wise, but when I

**Heather** 33:02

an earned you know, not just did you ultimately get the degree, but also earned one of the top awards for the work that you did, as you know, as did I different one, but no, but you know, you didn't just by some measures you squeaked by, because there were people who didn't want you to succeed. But there are others who saw what you're doing.

**Bret** 33:27

To be clear, I have no sense of embarrassment about what I accomplished, I think I accomplished quite a bit more than was necessary to get a degree. But I did barely get by, because I did have a lot of antagonists by the time I was over. But anyway, the point of this, some of them, you poked first, I may have kicked the hornet's nest. But the point I wanted to make is even having gotten the degrees and seeing the system and then taught him the system for 14 years. I never, never assume that if somebody did not graduate from any level of this, that that tells me where they are with respect to their ability to think I never do. And the reason I don't is that I've seen so many counter examples of people who are wickedly good at thinking who don't have the credentials. And so

**Heather** 34:19

but you and I are unusual illness. Most people in the system, take the degree as the thing that you need. If I'm going to talk to you, like without the degree I know you're not worthy is I mean sometimes actually, the stated position. Some academics, well, actually,

**Bret** 34:34

okay, there are two things that need to be said here, one, if you did it without the system, if you've managed to figure out how to think without all of that scaffolding, in my book, you get more credit, actually, to the extent that you are self taught all the better. But I also want to just say, I got got my degree in the end because I had to in order to get the job that I was on already doing, I was told that I would need the degree if they were to hire me permanently. And there was a competition and all of that. But whatever. The point is, I went through this phase. And you know, it wasn't that I couldn't have gotten my degree because I couldn't have gotten it. I was disgusted with the process by the time that we moved to Olympia for you to start the job that you had gotten. And so I didn't really want the degree. I didn't like what it meant. I didn't like what came with it. And so ultimately, I was forced to go back and get it. I'm glad that that happened. However, I know that one of the things that I valued about not having it was that it meant that all of the people who don't take you seriously because you don't have the degree, I didn't need to bother with them, right. So it's sort of the world nicely, people who were still willing to interact over content, even though I didn't have the degree, that tended to be a smaller, much more interesting group of people. So anyway, you know, there is something to be said for having the degree it settles certain things in people's minds. But, you know, if you if you're maintaining an intellectual life outside of that system, more power to you.

**Heather** 36:06

Yeah. So, you know, the question is, what do you what do you do, you're still haunted by hunger for knowledge, and you've got guilt, I think, you know, hopefully we've assuaged the guilt explained where the guilt doesn't have any place here. Haunted, you know, haunted by hunger for knowledge. You don't say anything about what kinds of things you're interested in. So, you know, it would be impossible for us to say how you go about doing this, but, you know, become an autodidact become someone who can figure out how to how to learn themselves, how to teach themselves, how to learn and, and be, you know, a critical part of that will be being open, just remaining open to any, anytime you have a glimmer of like, oh, that might be interesting, oh, my brain just sparked over there. You know, in less, it's junk, fill in the blank, you know, junk food, junk, sex, junk news, junk, whatever it is, if you didn't think you were interested in I don't even know, you know, 12th century China, and you see something that goes like, Oh, I wonder, you know, go, go watch it, go read it, go do whatever it is, and you won't be able to follow all of those trails. We are big fans as as we write about in the in our book of being generalist as much as possible, but recognize that every every thing that you do that expands your breadth has the likely cost of not being able to go deep on something another step deeper on something you already know. So, you know, certainly brought early because if you start investing in depth early, at the point that you do get exposed to more stuff, you're much more likely to find that actually, the thing you went deep on should have been like fifth on your list of things you wanted to go deep on. And there's other things more interesting to you out there. So expose yourself as broadly as possible early on, to figure out what kind of knowledge you're really most interested in what like what, what ways of informing yourself and producing new information in the world are you are you both best at and most driven to participate in.

**Bret** 38:05

And I would just add, you know, as much as a lot of the modern landscape is heavily compromised by all sorts of stuff, there's also really, really good stuff there. And the number of people who will teach you what they know, for free on YouTube is staggering. And a number of ways. I'm very fond of videos in which somebody who knows how to do something amazing, shows the production of it without a word. And the point is, that's a great way to train your mind. How much do I understand about what they just did in order to reach this point? Right. That's a great exercise and especially if you have the ability to try to recreate it. That's a

**Heather** 38:44

really low Yep, we got a helicopter flying real over our house. Like crashing out one of our very may trees. That was an airplane, not a helicopter. Oh, yeah. didn't have the Yeah. Okay, then it's not gonna land what i'm not i'm not so concerned. Yeah. First of all, thank you for the podcast. Secondly, where can one start learning biology outside of the academic system? Well, so this, this is a related question, right? And, you know, partially, partially here to some degree, although we're not we're not trying to create curriculum, so it's not organized. And, you know, similarly, our book, which still isn't out for six more months, actually, six months tomorrow, I think is, you know, organizes to some degree but isn't meant as a curriculum and so, you know, depending on what kind of biology you're interested in, for instance, the one book that you and I almost always started with, when in each of our programs was The Selfish Gene 1976. Richard Dawkins, still the classic in need of updating Brett and, and yet Yeah, there's a few ways in which is dated, but he like he wrote such a terrific book that although it could use some updates, there's very little in it that is out of date. If that distinction makes

**Bret** 40:13

sense. It was almost entirely right. As far as it went right there is

**Heather** 40:18

but it but it remains almost entirely right as far as it goes, yes. which is surprising.

**Bret** 40:23

And to the right degree to which the field has moved on and discovered great evolutionary trees to stack on top of it is it's, it's incorrect, it has not largely happened. So in any case, yeah, it's a great place to start

**Heather** 40:39

and feminine, frankly, if you know if you're interested in sort of the other half of evolutionary biology, which is to say the sort of Origin of Species and deep history stuff, another Dawkins book, which was always a book that I use when I taught vertebrate evolution is an ancestors tale, which is terrific as well.

**Bret** 40:57

Great One, I would recommend if you're interested in adaptation itself, climbing Mount improbable, is quite excellent. More Dawkins. More Dawkins? Well, yeah. I mean, the man is a gifted writer, and deeply insightful if

**Heather** 41:10

you're interested in tropical biology. short book, but you and you've mentioned it, and I feel like it was right, it was here. There's clarity on a Pro Bowl, there's a Selfish Gene, tropical nature. Nature. Yeah. Just absolutely terrific. That's a great one. You know, we're, we're going to have no answers off the top of our head, if what you're really interested in getting into is molecular biology, for instance, yeah. But

**Bret** 41:37

you know, a lot of that stuff, too, is available on YouTube. If you're interested in how cells function, you got to figure out where the good stuff is, rather than the stuff that cuts corners, but there's a lot you can learn cellular biology on YouTube. That sort of thing. Cool. 43 minutes?

**Heather** 41:54

Yep. Well, we're gonna be we've only answered a couple here in this hour. So we're gonna get through a few more of these at least, wouldn't? I think so these are two questions from the same person. I think they're different questions, but they may both have to do with your conversation with Jordan Peterson, I'm not totally sure. Okay. Wouldn't consciousness overriding the genes as you put it simply be in service of the genes as well, since evolution would select for self policing genes to increase fitness by weeding out the bad and keeping the good?

**Bret** 42:29

Lovely question.

**Heather** 42:30

So that's actually did you talk so again, I haven't listened to conversation. Did you talk about omega with Jordan? Yep. So let me just read the second question, because the short answer to that question is yes. Right. in service of the genes, wouldn't it be in service of the genes?

**Bret** 42:46

Yes. But you have to be really careful about what Yes, it is. There's no question the fact that we are going to drive ourselves extinct by following the genes narrowly and continuing to play the game that they taught us to play so well. Right. does not mean that it is useful that ultimately the preservation of those genes would be in the genes interest if only the genes could figure it out.

**Heather** 43:09

Yeah, but that's not I think you read a lot more into the question, then is there wouldn't consciousness overriding the genes as you put it simply be in service of the genes as well? That's I mean, that's part of omega principle,

**Bret** 43:21

right there. Yes. But the problem is the game theory, of course. And so the point is, the recognition, the recognition that this is ultimately true, that if only the genes could think they would be in favor of the things that we think on their behalf is true, but it does not solve the game theory problem, which is deep, and for which I've already been taken to task, once by somebody who did not realize that I was aware of that hazard

**Heather** 43:45

by a biologist. Yeah. You'll tell me off here, of course. I love Jordan Peterson. The second question reads, but feel that he misses the mark with regards to games of social hierarchies, by not realizing the competence itself is a form of power one might wield. I enjoyed seeing how much you agreed on in the end. So I'm not sure that's a question but you might

**Bret** 44:11

riff briefly. Well, I agree, Jordan, and I do agree on a ton. And I love that and I think he and I have a kind of shared delight over the fact that these come from very, very different places. And so you know, if there's one way to know when you're thinking correctly, is that somebody who has high quality tools starting from a completely different place arrives in the same location or roughly there so I feel

**Heather** 44:37

like again, yeah, so I will, I will watch or listen to your conversation with him and I look forward to doing so but not having seen really anything from him for a while. Now, one of the things that I think the two of you have in common, and it's not the only thing is that you both love it when people disagree with you. And you know, a lot A lot of people can't imagine that there's anyone like that out there. I try for that to be true for me, but I have to, I have to try. And there's definitely been moments, especially in teaching when it felt amazing, but it's, but I think I know that you and I think that Jordan, actually just just walk around the world like hoping for people to disagree with you at some level. Not, you know, not out of a sense of not nitwits, and not people in bad faith and all of this, but you want it to be challenged, so that what you know, to be true becomes a better and better representation of the truth.

**Bret** 45:38

Yeah. And in fact, one of the things that I'm reality most frustrated by I guess I would even say angry about with the collapse of the institutions and it taking out our field with it, is that, you know, it did not create the proper what's the word proper level of challenge, right, it's really easy to beat the field because the field is pretty stupid. Right? The field is stupid, not because the people are in it are stupid, but because it had there, there are reward structures that cause the field to stick with ride as long after it should, which makes it easier, easy to add think it. But that's not nearly that's not so fun. What would be really fun is if the field were super vibrant. And the point is, yes, it would then be harder to beat. But the point is, the quality of all of our thinking would go up, because there would be, you know, high quality talent. And so anyway, I think I'm sure that Jordan has a similar sense i and you know, and in essence, we end up having to meet people from other fields, you know, renegades from different fields may actually be better at pushing each other around, then members of your own field whose errors in thought you already know thoroughly. Yeah.

**Heather** 47:00

And you won't you share a sort of intellectual development and developmental environment, so that you know, your biases and assumptions are the same, and it's harder to see where they're flawed.

**Bret** 47:09

Yep.

**Heather** 47:13

Do you fix your own dogs? every article online seems that this is about reproductive fixing. Yeah, I

**Bret** 47:20

agree with that.

**Heather** 47:22

I hate that. I'm gonna use the scare quotes. Do you fix? Oh, it

**Bret** 47:25

says in we're gonna fix? We're gonna fix them right up?

**Heather** 47:28

Yeah. Do you fix your own dogs? every article online seems only to be propaganda to exaggerate the benefits can't shake the feeling that I chose wrong. And if I were responsible owner, fixing it could be a net negative for the dog. That's a real question. Yep. And it has potentially different different answers, depending on the sex the dog.

**Bret** 47:52

Yeah, we've we've fixed all of our animals. Yeah, we can we

**Heather** 47:55

only had one dog. We've had a lot of cats. And we fixed all of them. We thought about not doing it.

**Bret** 48:02

Yep. It just impractical. Yeah. Which doesn't mean you know, if, if you've got the, you know, if you're living on a ranch, and your dog is able to be outside and all of this, that that's one thing, but it just isn't it is not practical for most of us. And, you know, for us, it's I don't, you know, I don't think the argument that it is, you know, worse for the animal is all that persuasive, because I think these animals have a very good deal if they have an owner that really cares about them, and you know, and we'll go the distance for him.

**Heather** 48:36

It's less like, you know, especially for males, I think it's less like the experience of being a wild animal. Yeah, it's less like the life they would have had. Yeah, but they still have a terrific life. Yeah,

**Bret** 48:48

they have a terrific life. But, you know, innox the trade is a good one. And I think, you know, what I was gonna say is that for you and me, obviously, we're animal behaviorists, to the extent that these animals bring a degree of animal behavior to our house that then we can think about and talk about, that's great. And so we would like to leave them as intact as possible. But even we with that as a as a priority. It's, it's really, you know, I mean, we're facing the discipline issues on the two kittens. And if this is a problem more with cats than dogs were early bad developmental experiences that we weren't present for, that we weren't present for had nothing to, you know, no knowledge of have implications for the way the animal is, you know, these are, well socialized creatures, but they're not easy to get along with. They're destructive and very hard to, to change. Among other things, but you know, styrofoam, I think, especially Fairfax would be even more of a terror if he was intact. And so anyway, I think I think the way I would think about It is. But for the ability to render them capable of playing along in an internal and better indoor environment without creating havoc, they wouldn't have lives at all. Yep. And so, you know, that's the trade and yeah, we just kind of got to get used to it. Yeah,

**Heather** 50:17

I agree. Last week's potatoes don't do or don't want to be eaten talk, which is to say the discord question from last week about really, should we be eating potatoes? made me think, is domestication a good evolutionary strategy for the domesticated for the gene, the individual or the species? And what does this mean, if the aliens invade? So we talked about the domestication question last week? a fair bit? And yeah, the answer, you know, ends up being just as we were just saying, with regard to cats and dogs, you know, they have, they are alive, and probably wouldn't be, but for us, having domesticated them or, you know, fixed those individuals,

**Bret** 50:57

I would say, there's one major difference in the agricultural version of that story versus the pet version, which is that because the agricultural version takes place out of sight, and so directly driven by market incentives, the way we raise animals in that context is absolutely appalling. And there's no defending it. Yes, that is separate from the question of, in principle, at the point that you domesticate an animal, and then at the end of its life, you eat it off, what does it think of that? It? Obviously not talking consciously, but would it prefer not to be and not to get eaten? Or does it prefer to be and have a good life that suddenly comes to an end? I think it's quite clear that our instinct, because we, if we try to put ourselves in the mind of the domesticated animal, we are so horrified by this, we cannot grapple, we cannot grasp the actual long and short of it, which is, you know, look, you know, you're going to die. It could be horrible. Does that mean you'd rather not have been not right, right? We all get that.

**Heather** 52:02

And so, you know, what does this mean? If the aliens invade? Well, if if there are those kinds of aliens who are interested in domesticating, us or in driving us extinct? You know, the, the option that's on the table there, that that we took off the table for, say chickens A long time ago, but there would only be a few, wild, whatever they are jungle fowl around today, but for that, is the equivalent is where we are now. So in if it's those aliens, we prefer that they never show up. Right? So if they've shown up, do we prefer to be domesticated versus to be driven extinct? I think you know, the logic has to extend to evolutionarily we prefer to be domesticated. But you know, the third option is we prefer they're not there, or you prefer that they don't show up and force the choice on us.

**Bret** 52:59

Well, I think it's a little different. For one thing, I think there is zero chance that the aliens would we're talking about aliens that are capable of getting here, which tells us a certain amount about who and what they are. They're not going to come here to eat us. Right? Well, so

**Heather** 53:15

I did preface this by saying if it's if it's, you know, those kinds of aliens, they've come here at their hostel, they want one of two things, they either want the planet for themselves, or they're willing to keep us around as domestic?

**Bret** 53:25

Because that's, that's the question is, what is the viable category in which they take us on as co inhabitants of the planet? You know, if the planet has resources, you know, minerals that they need, and they're going to exterminate us, then we know what our approach is, if they are going to leave us intact here. Maybe the thing procured? Well, but that's the thing is,

**Heather** 53:49

I mean, like, really like pets,

**Bret** 53:50

the well, you know, and actually this is, this is well done in the tripod series, in which effectively this has happened. And there is a chapter in there, the Masters cat, I think, in which one of the people has been taken into the tripod city, understands himself to be effectively the cat of his master. And it's not a very nice, it's not the relationship that we all have with our cats. It's it's much more terrible. But in any case, the point is, if the aliens came here, and we're interested in a mutualism, which is what we are effectively arguing we have with our domesticated animals, then the point is, actually there are mutualisms that would be worth signing up for, but we would not want to sign up for a subservient relationship in which our interests don't count and their interest count and we take on that role, but, you know, let's put it this way. There are some things that the aliens probably know that it would be a really good time if we figured it to be real good moment to figure that out, because we may not be around much longer if we don't

**Heather** 54:59

Yeah. So you're inviting them.

**Bret** 55:02

I believe they should make contact, they can reach the moderator at moderator.

**Heather** 55:13

Moderator Darkhorse moderator once content generating neural net tech, for instance, deep fakes, makes video footage inadmissible. Might neo-con blackmail paddle cults like Epstein's cease? media was never proof like drawing writing and gossip until 1800s film tech that is a that is

**Bret** 55:46

I'm not getting the assertion yet What? So I get the deep fakes.

**Heather** 55:50

Once basically deep fakes

**Bret** 55:53

are so good, you can't tell that that's what they are.

**Heather** 55:57

I neo-con blackmail paddle cults like Epstein's seas. So the claim is that Epstein did whatever he whatever that thing was, by effectively holding, holding people hostage because and evidence against them guys, I think. Yeah, that that that's where we are.

**Bret** 56:27

I'm not sure that we are headed to the priors of this question. In other words, are we not going to be in an arms race about deep fakes? In other words, I'm not convinced that there is a simple end point to the admissibility of video evidence, what I think you will have is increasing sophistication at avoiding detection. You will, you know,

**Heather** 56:53

so we expect an arms race where there is increasing sophistication of detection. Yep, as well. And I, I've seen almost none of that. And as, gosh, right after Obama left office, I saw a pretty compelling, deep fake of him saying things he'd never said. So that's now, you know, four years ago. Yeah. And presumably, a lot has happened since then, in terms of the technology, but what I haven't seen is the evidence of where the, the counter part of that arms race is.

**Bret** 57:27

Yeah. You don't want to know, it'll it'll,

**Heather** 57:30

it'll drive? No, no, this would be the important part, the good part, you're not gonna like it. It's not good enough.

**Bret** 57:36

But no, it's horrifying in its own right. Like, imagine that you have to bug yourself, in order to ensure that if somebody comes up with a deep fake of you, you can prove it didn't happen. Right.

**Heather** 57:50

So moving to the Amazon?

**Bret** 57:53

No, no, it's already there.

**Heather** 57:55

We're aware. Okay. Let me get to chat. There are too many good questions here. Another two more, and then we'll skip to that we'll go to the next hour. Gosh, I'm sorry. Um, does encouraging humans to be more cooperative and less competitive from a young age? It's an extra word in here hold on. Could encouraging humans to be more cooperative and less competitive from a young age be the solution to counteract our gene propagation mechanism as a species? If not, then it will be a viable solution to this problem.

**Bret** 58:32

The problem is we cooperate to compete. And so to the extent that you are teaching collaboration, you are also teaching competition. And there's a question about what level to teach it. Right? Who will you collaborate with? Against whom? And so yes, there are likely to be developmental answers. If we could figure out how to teach the lessons about how to collaborate we could get rid of processes that are dangerous and destructive. But naming the here's the thing that you know, I mean, look, sports teach you to cooperate to compete, right? Perfect example. Yep. Right? So sports are good. they'll teach you certain stuff, they probably teach you how to fight a war. Right? If you're going to be you know, in a group of people that has to face danger together knowing how they're going to think it's it's very analogous to what happens on a sports pitch. But what the lesson is for the game theoretic problem that the question the questioner is asking about I don't think we know and we shouldn't be we should be figuring it out as I think the answer but I don't think we know yet. Yep.

**Heather** 59:36

Okay. There's actually just a comment here and then one more question, then we'll move to the next hour. The comment is the problem apropos our conversation last hour, the problem is that the simple diagnostic they use for depression also covers normal sadness. And we live in a time of irresponsibility, people would rather take meds and make better or new life choices. And I think This is you know, to, to the point that you made the depression is, is a category that includes more than one thing. Its pathological form and the non pathological form,

**Bret** 1:00:12

the pathological form and the non pathological form exists together. And we tend to name the category after the pathological form which gets the study and that results in us not grokking, the benign version or the useful version.

**Heather** 1:00:25

Right. Brett, regarding dyslexia, I know that Heather is your reader and ours, but I see you it's successfully at times what have you done to improve? My son is dyslexic. Also, what is the name of the third cat?

**Bret** 1:00:41

Depends which is the third cat,

**Heather** 1:00:42

I think probably. So we've got Fairfax and Moxie, which is a nickname of Melrose because we tried to name our cats after la streets, because when we don't, we end up with really stupid names. And we'll tell you that story. Another time.

**Bret** 1:00:57

I'm not even gonna allude to, I don't want them to know that it happened.

**Heather** 1:01:02

And yet, our third cat, the 10 year old this month, does not have a stupid name, and yet is also not named after an LA Street. And he is Tesla. Yeah, named after the scientist, not the car, as you have said, Yes. So what have you done to improve your reading?

**Bret** 1:01:19

Well, first of all, I should tell you, when I was a kid, I lived in abject terror of being asked to read out loud. And when, as so frequently happened, there, we were in a circle in the class, and we were each reading a paragraph. And it was coming around to me, I would abandon all attempts to keep track of what we were reading, and I would count paragraphs and try to figure out what paragraph I was going to have to read. And then I would try to read it through enough times that I knew what it said. So at the point that I had to read it out loud, I did not embarrass myself.

**Heather** 1:01:55

That sounds like an education.

**Bret** 1:01:58

No, it wasn't. It was a survival skill is terrible.

**Heather** 1:02:04

And I've seen even when we were teaching undergraduates, and when we were not you and I co teach, but when I taught with some other faculty who, some of whom I really admired, I would see them do read aloud, which didn't happen a lot in college classrooms, but didn't some and and not let people pass. And my sense was you like you always let someone pass if they feel like there's no good that will come up with this. You don't force public reading on Pete. Well, here's

**Bret** 1:02:36

the problem, though. I agree, because there's this particular thing with reading. And what happened to me was traumatic, it was not useful. But I do have the sense on a related topic, that is to say, speaking, that there is a rubric, like the following one. speaking publicly is a useful skill, like being able to read, almost all of us have terror about it at first. And the thing that cures it is getting through the terror successfully a small number of times, so that you can get to the point where there's actually a reward for having done. And so my sense is, I don't want to free I don't want to free students from having to present in front of the class. And in fact, I want them to do it enough times that they walk away with that skill.

**Heather** 1:03:27

Okay. But that's, that's different. So I do want to I do want you to answer this question, but I'm being required to read privately, in order to do work that is being assigned is a legitimate requirement for in an educational setting, just as and I required this in almost all of my programs. If anytime I had a long project that students were doing, they were going to have to not just write a paper, but also give a public presentation, an oral presentation of that work. And yes, people are terrified of it. But really, I don't I hardly ever had anyone come to me and say, Please, please, please, can I try to kind of do something else, I really am scared of public speaking because, frankly, in my classes, as I think in your students just knew how that would sound like yes, I get that you're scared. And I get that this feels like a trauma. But that's part of the reason you need to do it. That is different from being forced to read or frankly, speak in any given classroom conversation. And, you know, I feel like some of those same faculty would be like, everyone has to talk at least once in any given seminar like God, no, because like, I had an easy time reading aloud. Yeah. as a as a young student, but I never talked in class and the prospect of doing so would have would have had exactly the same effect on me as being the prospect of reading aloud would have had on you, I wouldn't have had an ability to pay attention to anything that happened in the class until I had finally said what you know, click, check that little box, which would have completely made the educational value of the experience plummet. Okay.

**Bret** 1:04:56

So I think the thing that you and I would converge on here Is that the right thing to do is to be upfront about the fact that this will be required. Absolutely be very clear about why you're requiring it. Right? That I actually am promised

**Heather** 1:05:10

not to spring it on someone, right? Like you're in class one day, not just not just like, no, but not just spring it on them, like, at some point during this quarter that you're going to be required to do this. And hey, today's your day, but no, like, on, you know, on March 30. That's the day that you have been scheduled to come in and do your 10 minute this or your 20 like, whatever it is like, you'll know that it's coming. Yep. And plenty of No, no pop quizzes. Yeah, it's not going to happen.

**Bret** 1:05:36

Right? Well, I think it should be open to people who want to, and frankly, one of the things that's best about having people come up to the board and try to explain something is that they opt in. Yeah, that's why they said, I'm up for that. Because one thing that, you know, the distinction that I've pointed to repeatedly about the difference between knowing how something is done and knowing how to do it, it's very easy to sit in a class and not have any idea how hard it is to convey something clearly. And so then they hear you say something that's not quite clear, they have a sense of like, come on, and then it's like, okay, you try. Really want you to try this, because you're gonna find out what happened. Yeah, and then you'll know a lot, no, and

**Heather** 1:06:21

actually, so we're spending probably too much time here. But I actually began to do little public speaking things through the quarter, especially if I was doing like a two quarter program, in addition to some larger presentation at the end for some longer project. And the value in in that in part was, as soon as a student has gotten up in front of the class and seeing what it is to be faced with those faces, some of whom are paying attention, and some of whom aren't. And you can tell, you just know, and even if you've banished the devices from the classroom, as I tended to, like, you know, who's actually paying attention, who's got their phone to the tail, wherever they go, you can see in people's eyes, every one of those students, as soon as they've been in front of the class becomes more receptive. When, when is the faculty in front of the class going like, Okay, guys, come on you only coffee like, well, I look alive here, people begin to have theory of mind about the position of what it is to be in front of the class. Yeah,

**Bret** 1:07:19

that's true.

**Heather** 1:07:20

How did you teach yourself to read more effectively?

**Bret** 1:07:23

Well, so I do think, a lot of this dyslexia, so I don't really think dyslexia is a thing, I think it is a symptom of several things. And one of the problems with it is that to the extent that reading is arduous, and that is my experience of it. And I'm now to the point where I read short things easily, but a very long thing still feels quite arduous. And so it's like, there's some distance you're comfortable running. And then there's some distance that would feel like a real slog, it's like that distinction. So one thing is, if reading is arduous, you will do less of it. And I am convinced that virtually all of my trouble with spelling, which is like hilariously spectacular, is the result of a arm's length relationship with reading. It's not, it's some symptom of the same thing. It's a downstream consequence of what happens if you just haven't seen as many words right behind me, I think of them auditorily? Because that's my relationship to language. So the answer is, how do you get over it? Read more, that's a slog. So it's a little bit like saying play better tennis. But that is where the key is, and how do I read out loud better than I once did? I very frequently go over the thing beforehand, because if I didn't, I would stumble over it like crazy. And it would be just like, I mean, I now wouldn't be embarrassed about it. But

**Heather** 1:08:47

But how did you become motivated to read more? I mean, you grew up in a family of educated people, where they're, you know, there were there were books, lining walls and such. I don't think your family had as much of an emphasis, like there wasn't as much sitting around reading as there was in my family. But you know, both your parents have advanced degrees, etc. So it wasn't that you didn't know that there was value in it as a child. Well, how did you come to because I think, especially for I remember what it says. It just says My son is dyslexic. But you know, how do you excite interest? And you know, and we have this with, you know, we have this with our kids, too. Yeah. How is it that you create the incentive?

**Bret** 1:09:32

So it is more complicated than that? Because the real answer is that there is a tension between the value of what's in books and the cost of what is in books, and that cost is not simply the investment of reading them. And so, for me, I am keenly aware that when you read a book, especially a book, part of the reason that I may like shorter things better, even if I read a bunch of them, and so it To book length reading, part of the reason that I like it better is that it's very hard to resist the mindset of somebody who wrote a book. If you go through their whole book, right, if you take that mindset, and then you abstract it to a magazine article, you still get a chance to take a tour through their worldview, but you don't take it on. And part of the problem is that the cost one of the costs of books, is that, once you have inhabited somebody's mindset, it is very hard to remember what the world looked like before you knew what it was. And so that has a consequence, a positive one, which is that you get the benefit of what that person knows, and a negative one, which is that you've taken on some of their blind spot. And so in any case, the point is, it's not that I have overcome it, it's that I have moved my assessment of cost and benefit to a place where, you know, I mean, I do have a very high threshold, if I start reading something, even if I think there's good stuff in there, but it's not paying backwards saying stuff I really think is wrong. Right? It's very hard for me to keep going with it. So, so I don't think I've done exactly what you think.

**Heather** 1:11:12

Well, I feel like you answered the inverse question. I now I want to know how you managed to get any reading done at all?

**Bret** 1:11:21

Because there's, I mean, I don't understand how the answer isn't obvious. It's a cost benefit relationship. And at the point, given your internal model, at the point, the benefit exceeds the cost, you're motivated to do it. And at the point, you perceive the cost, exceeding the benefits you stop. And

**Heather** 1:11:43

so that's what you tell your nine year old, know what

**Bret** 1:11:45

you tell your nine year old. Hang in there, your nine year old probably needs to read more. Right? probably getting them to the standard of everybody else may not be doing them a favor. In fact, it may be that if they have the kind of, you know, mind that benefits from the independence,

**Heather** 1:12:05

will you ever driven to like comic novels? Like were you driven, like, I know, boys, in particular, tend to get told and like, our boys never had and I don't know if you did, but like boys in particular tend to gravitate towards things that aren't considered serious when they're when they're children, and they're supposed to be learning to read and they end up they end up looking at, I don't know, like manga and anime, anime and such. And my sense has been there's some stuff in that, in that corner of the universe that I don't want, like the once it goes towards porn, I don't want my kids anywhere near it. But also, like, if you need to read in order to get the value out of the thing, why on earth would you tell the children that they shouldn't be doing that, and they need to pay attention to this horrible stuff instead? Right?

**Bret** 1:12:53

Yeah, no, I had I had none of that. You had no you. Okay, I didn't. And you know, my senses. I took stuff apart instead. And that was very, very good for me. So it's not like,

**Heather** 1:13:05

again, not not helping the, like, how do you encourage a child to read?

**Bret** 1:13:09

No, no, I think it is helping in the following sense. Because the parent of a child who has an obstacle needs to understand what problem they're actually trying to solve. And part of the problem is, you know, what you absolutely need to be able to read to do certain things. And the other part of the problem may be actually this may be building other kinds of skills that will be really useful and I don't want to substitute one for the other.

**Heather** 1:13:31

So maybe the thing that's missing from this conversation that you and I have both said a lot is given how that question sounds given that it's written in you know, good English by someone who clearly knows how to read and without, you know, a parent who cares, your son's not gonna end up illiterate and he may read a lot later than you were hoping for. But if while his peers are learning to read and even learn to love to read, your son is instead taking apart things learning how to put them back together, or learning to play the guitar or you know, any number of other things. There's a good chance that that's going to be a deeply held skill and love that serves him.

**Bret** 1:14:14

Yeah, actually, it occurs to me as much as your encapsulation is exactly right that I do know the answer to this

**Heather** 1:14:19

awesome I kept trying to get you there. Well, we'll work so fast

**Bret** 1:14:23

things like that. The answer is to read with them and don't keep moving on to new stuff. Moving on to new stuff is what adults do because reading is about the content

**Heather** 1:14:37

so when you're saying read with you're not so I did a lot of reading to our boys and and actually to all of us, we read. We read the tripod series and we read Harry Potter and we read Laura Ingalls Wilder and we read all you know a lot of a lot of these big line Madeline L'Engle and, and such, but also your that's not what you're talking about. You're talking about us specifically because I was tearing my hair out. And it wasn't it wasn't the relationship was not working with our younger son, Toby, you would have him read to you. Yep. And rather than push on, you would go over and over and over and over again. And I don't think it was fun for either of you. But it were

**Bret** 1:15:22

no, we made it fun because he would read something. And it wouldn't be what was on the page. And I would,

**Heather** 1:15:30

and you recognize that part of his brain in a way that I was like, I don't even know how you're living. Like, I don't know what it is to walk through the universe like this. Right? And you recognized it.

**Bret** 1:15:39

Yeah, I mean, it's very, it's easy for me to recognize. And anyway, the point is, it's sort of like,

**Heather** 1:15:46

you'd say it back to him be like, does that make sense? No, I

**Bret** 1:15:48

wouldn't. Oh, no. Are you kidding? That's way too straightforward. I would start from the premise that it did make sense and then extrapolate to the universe that that would imply, of course, turned everything on its head. And you know, it was fun.

**Heather** 1:16:02

And it worked because as I presume Your son is the person asking the question within smart boy who, you know, no problem with language and spoken like, you know, this kid who the teachers always you always be like this, whatever, those extraordinary but ask them to write and it's illegible, like what's going on?

**Bret** 1:16:17

Not only legible, but you know, yeah, it's got lots of issues, but right. But anyway, yeah, the, you know, there it so again, the key thing however you operationalize it, is that adults read as a means to an end, it's about the content, whether that's narrative fiction or nonfiction and you're trying to learn about a subject, but you read it, there's no point in going back unless, like you didn't get it all the first time. Right? If your point is to read with children so that they read better than the point isn't about the content, it's about the process. And so getting, you know, going through the same thing twice the second pass through something where you've made error after error, and probably didn't get the content because you were making so many errors that it made no freaking sense, right? Going back to that same thing and being able to read it all the way through out loud so that it makes sense and so that you're not stumbling about it is the process right? That's the training to read process. And anyway, make it fun. And don't do it too much do it enough. But something in there is the is the way to go. Excellent.

**Heather** 1:17:26

And we haven't answered any questions in the second hours. We're doing Itzhak Sorry, man. Thoughts on the new superstrate phenomenon.

**Bret** 1:17:36

Oh, man, it's great. Yep, it's a it's it's really something but I feel like you know, it's the first stage and the discovery of a whole clade of of our gender identity or gender identities Yes, it's the first because the thing is it's one thing to only be attracted to

**Heather** 1:17:59

total sexual orientation identities I don't

**Bret** 1:18:01

even juggling I don't know what it is but it is one thing to be attracted to only people who were born into the sex that your right weren't born into the right but it's another thing I think sickness is included in the Yeah, it's another thing to have always been only attracted and then there's yet another thing and

**Heather** 1:18:23

when super super straight leaves exactly perma straight karma super straight now

**Bret** 1:18:27

it's ultra super straight. And then if you believe it is going to continue that way based on your experience of yourself then it would be ultra super perma straight I believe so anyway know what i what i really think of that says so deep it's it's not but the thing that I really think is this this is a wonderful demonstration of a premise that all adults should be well aware of which is

**Heather** 1:19:02

even separate is like super straight Yeah, probably most people watching know but

**Bret** 1:19:07

so the in an effort not to be belittled and silenced, I believe a large number of people who do not subscribe to the new What is it even ideology of the new version of trans ideology have recognized themselves as their own they have affected please.

**Heather** 1:19:38

I think that there was one guy who made a video and he said you know what? Just because a guy a straight guy said I'm not in the dude to declare that them that they're women, and that doesn't make me transphobic what I am is super straight, which means I'm a dude. And I like women who were born as girls and Okay, you need that to be a gender identity. I'm gonna call that super straight. Not transphobic. I'm super straight.

**Bret** 1:20:07

Yeah, what she said. So, um, yeah. Okay, so starting from there I was I was trying really hard not to get canceled. And anyway, I think I did a very poor job. But

**Heather** 1:20:18

yes, that I think there's nothing in what you said that was cancelable.

**Bret** 1:20:21

That's because it was not parsable. And therefore, well, actually, that's no protection, is it? But in any case, here's the thing when you set up rules of the game, right, these rules that we have been handed are rules in which somebody has cheated. And they've placed themselves at advantage by building a taxonomy that we have to subscribe to. Because the claim is that science has discovered this thing, right? And so very clever for somebody to pick up on those rules and say, Oh, yeah, okay, even in that rule set, actually, you you've handed me exactly the tool, because you've basically said that anything goes with respect to a, you know, a new gender identity. And I got one. And so the point is, look, yeah, it's veils, it's, it's rauzein veil of ignorance stuff, right? Don't make any rule you don't want to live on the wrong side of and so the fact that somebody made up a bunch of rules that they're now going to force us into with respect to gender identity, to come play at that game, right? And so anyway,

**Heather** 1:21:22

especially since they didn't count the number of possible gender identities, but we can we can run wild with this.

**Bret** 1:21:28

Yeah. So anyway, I think I'm very I'm pleased at the invention of superstrate as a fancy new gender identity, when really, a lot of us have not had a name for what we were for so long.

**Heather** 1:21:42

Yeah, minority position. Okay, what is the best evidence to prove that humans are omnivores and not vegetarian or vegan, I'd argue that a lack of access to meat led to our ancestors eating less of it rather than Physiology or moral superiority. Well,

**Bret** 1:21:58

I think the strongest evidence against strict veganism or vegetarianism is the ordinariness of strict vegans and vegetarians.

**Heather** 1:22:15

It's gonna be, it's the, if to the degree I now can't tell if the person asking the question was being ridiculous, or just bread is being ridiculous.

**Bret** 1:22:24

But the implication of your senses that I was definitely being reading, you're

**Heather** 1:22:28

included in that category regardless. Yeah. So the evidence spread, Zach, if you just want to show for a moment is going to be teeth and get the best physical evidence that we have. Oh, terrific. So this is this is from the animal diversity when she came out of University of Michigan, which I have contributed back back in the day. And you see the Kardashians on these mammalian carnivores. I think this is a wolf. Yep. that these are the shearing teeth. these are these are basically pre molars and maybe also molars. Oh, yeah. that have been fused into Carnival sales, the likes of which you'll find on all the carnival runs. Compare that to the

**Bret** 1:23:07

purpose of those teeth is the tearing of muscle

**Heather** 1:23:10

back there? Yep. Yeah, the ripping apart of muscle fibers, compared to that's a classic herbivore tooth, which are good at basically smashing cell walls, which plants have and which animal cells don't. And so you find you find evidence and dentition differences, and then in guts differences as well, where the longer the gut, the more likely and you know, obviously other things like additional stomachs and such, but the longer that go got, the more likely you are have a higher percentage of plants in your diet or have an exclusively plant diet. And we have

**Bret** 1:23:51

frugivores have shortcuts. Yes.

**Heather** 1:23:54

Yes, Leif. And we have a pretty short, pretty short,

**Bret** 1:23:59

pretty short gun and of the evidence is probably much stronger than our dentition would suggest, because of our tendency to cook meat, which goes back a long way, which means that the need to tear these fibers apart in their original form is much reduced. So the sense that our dentition reflects a certain amount of current every is probably it's a cautious conclusion. But the other thing is, you know, we know an awful lot about hunter gatherers who either continue to exist in a few cases have recently existed. We know what their diets looked like. And we have a lot of fossil and subfossil evidence from people that we modern science types didn't get to observe directly and it all suggests the presence of meat in the diet.

**Heather** 1:24:45

Well, you can do the cell fossil and sell fossil evidence. You can look at meditation, you obviously can't look at gut.

**Bret** 1:24:50

No, no, no, it doesn't even necessarily have to be the individuals, right? We have hearts and things like this. There's

**Heather** 1:24:56

material evidence. Yeah. So the

**Bret** 1:24:59

The answer is There's a ton of evidence of various different kinds. And it all points to a degree of carnivory. Right? Yeah, so that doesn't say anything about what we should do. Or maybe it implies something about what we should do, but it doesn't say it directly. But from the point of view of what we did evolutionarily, this is utterly unambiguous.

**Heather** 1:25:18

Did the laws of physics evolve like DNA specific to Earth? If the universe was to start over from a sort of Big Bang? Would physics be different from now?

**Bret** 1:25:29

I think this was an easy question.

**Heather** 1:25:31

I do too. But it's a fascinating was

**Bret** 1:25:33

a great one. Yeah. And I would say, A,

**Heather** 1:25:37

you have an answer. Yeah.

**Bret** 1:25:40

You just want the yes or no answer?

**Heather** 1:25:42

Well, we both said, I think it's an easy question. It's an easy question. I would say the you are about to launch into a long explanation which you don't include the answer, I think, I would say

**Bret** 1:25:52

the laws of physics will be the same. And the simple structures of the universe will be the same. And biology will evolve, it may or may not be similar, it will have some similarities, nope, no matter where we find it, and it may well have large differences. In fact, I believe it would likely have large differences of the level of the particular

**Heather** 1:26:13

Yeah, the physics, the physics don't evolve is my position as well. So a, you were he would begun.

**Bret** 1:26:21

So the a part is properly understood. biology is the extension of a physical process. And this is going to be a little bit of speaking in riddles that will have to be revisited later. But I believe the right way to understand evolution is that you have selection, before you ever have anything biological selection, produces all of the patterns in the universe, right? And that process eventually gets elaborated into something with heredity, which causes selection, which pre exists biology to turn into adaptive evolution, which results in critters. But the point is, it's actually a natural extension of the physics. And, you know, the idea that selection is inherent to biology is wrong synnex selection pre exists it and, you know, continues through, it's the heredity that makes the adaptation happen.

**Heather** 1:27:25

Genetically, you're a fish. Are you a stoner medically? So we could answer this at the individual level, or at the population level? And I would say, individually, no, not anymore.

**Bret** 1:27:44

I'm not even sure what the question is asking. Well,

**Heather** 1:27:46

another so at the population level, yep. I remember that. The on the day that I met Bob drovers as I passed as I approached his office with some fear, because I didn't know what kind of an amazing and terrifying Professor he might be. I passed a sign for a talk he had given the day before at the big amphitheatre in at UC Santa Cruz on the cove Aleutian of marijuana and humans. And I wasn't there for that talk. I don't know what he said, nor have I pursued this much. But you know, if, if that's if there's something to that, if, if the relationship between humans and marijuana is somewhat ancient, is it you know, could we be said to be medically stoners at the population level? All right. Does that strike you as a plausible interpretation of what the question might be? Yep.

**Bret** 1:28:43

And you were going to head to an answer, or now okay. So then I would say the problem with that is that it's too narrow, right? We are all very definitely descendants of ancestors with psychedelic experience of one kind or another. It's too common in cultures to have some mechanism to get to hallucinations, consciousness, hackers, consciousness hackers. Humans are consciousness hackers. And the culture that doesn't do it is the exception. Yeah, that proves the stoner is too narrow, narrow donor to generic. Yes. So the point is, you're not definitely downstream of culture that had a relationship with marijuana, but you're definitely downstream of a culture that had a relationship with elucidation. Yeah, for sure.

**Heather** 1:29:31

Brett, you recently talked about a model free. Oh, wow. I just lost where to go. You got this. Brett, you recently talked about a model for a shared consciousness. Have you read Douglas Hofstadter, his work on the topic? Specifically, I am a strange loop, but to a lesser extent also girdle Escher, Bach?

**Bret** 1:29:53

Nope. Probably should Yeah, I read

**Heather** 1:29:56

parts of girdle Escher, Bach, a long time ago, and I don't know why. A strange loop and maybe if it's essay length maybe we could read it together I find him dense I find it hard to get through his stuff but but he's he's got good ideas so you doubt that's the answer.

**Bret** 1:30:15

Don't have good ideas. Now you're telling me

**Heather** 1:30:20

seemed like the right moment.

**Bret** 1:30:22

Well, this is awkward when you guys give us a man can we have the room? I can we have the net?

**Heather** 1:30:29

Next question. serotonin, dopamine, and other hormonal regulators are always described as making you feel happy, sad, etc. Is this overly mechanistic? Is it possible that feeling happy or sad produces serotonin and dopamine? Yeah, it is totally a really mechanistic, and it's it not only potentially gets causation reversed sometimes. But it also pretends that it's all proximate. And there is no ultimate explanation for why we have these states and these hormones in the first place.

**Bret** 1:31:00

Yeah, and I believe there was a there was a study many decades ago about serotonin and hierarchy. You got lobsters, right, but this was not lost justice as primates.

**Heather** 1:31:16

Well, I've got I mean, before long before Jordan wrote his now, previous book, I, you keep to I'm going to fight like I used to include this lobster thing in my lectures actually. So I will find that if I

**Bret** 1:31:31

can. So what I was going to say, and this is, it's been a million years since I've seen this work. And it's possible I've Miss remembered something. But my sense was that serotonin Rose with position in primate hierarchy. And that the interesting thing was, if you gave a low ranking primate serotonin, if you artificially elevated serotonin in the primate, the primate would begin to behave as if they were dominant. And of course, the response then has to be if you think carefully about what has to happen next, if it were true, if simply having more serotonin may put you at a higher place in the hierarchy than simply you'd make more serotonin right? So what has to happen is you get your ass kicked if you start behaving like your dominant because you're full of serotonin. Right? And so the point is, it does suggest, totally you can you can speak about this very mechanistically. And you'll miss the Actually, it's part of a much more interesting story.

**Heather** 1:32:31

Absolutely. So I found the slide that I would give in one of my very early animal behavior lectures, and I tie my behavior when I was just introducing some of the interesting stuff going on at various clades. So it reads, I guess I don't have to read it out loud because this doesn't go audio only, but I'll read it anyway. This is among the crustaceans, it's not lobsters crayfish, some male crayfish establish dominance hierarchies through combat. When escaping, the loser exhibits a backwards tail flip behavior that simultaneously shoots him backwards and signals is submission to the other. And the winner of the fight exhibits a forwards tail flap that signals his dominance. What's new with this research, which was published in 1996, in science, is that both types of tail flap are prompted by the neurotransmitter serotonin. Depending on social circumstance, serotonin produces opposite behaviors.

**Bret** 1:33:18

So you're telling me not only is it not a rock, and not a rock lobster, it's a crayfish.

**Heather** 1:33:23

It's a great fish.

**Bret** 1:33:24

That's amazing. Alright, that's interesting. So yeah, cool. And that's from early lecture of yours.

**Heather** 1:33:32

Yeah, that's I did that every time. So the opening slide for this lecture, you can show again, Zachary. This is my animal Diversity Lecture which usually took you know, eight or nine hours over the course of many days that I would just go through Wow, that the format of formatting because it's an older version of because I haven't lectured in for years now the format and got off but you know, just introducing the various we got a few good mollusks and then I think we're not quite we got arthropods right up front.

**Bret** 1:34:06

Yep. All right, Miss your lectures.

**Heather** 1:34:10

You do too. There are a lot of fun. There were a lot of fun that

**Bret** 1:34:13

you invested in building them so mightily they were a thing to behold

**Heather** 1:34:19

Yeah, maybe there's maybe there's another opportunity at some point to to do those again. Somehow. The Biden ministration has usurped and poison the word unity intentionally what can we do to rebrand?

**Bret** 1:34:35

Yeah, I agree. I do. I cannot help but take this a bit personally. But it's also at some level, I believe. flack over the target. I think they realized that, you know, this, this is a resonance concept for a reason because frankly, a lot of us are sick of this shit. So anyway, what can we do to read And stay tuned that's coming. It's really important. And, you know, let's put it this way the the silver lining on the Democratic Party having stolen the word unity is that they're not any good at it.

**Heather** 1:35:16

Now they don't seem to be good at it

**Bret** 1:35:17

now they're decidedly terrible. Yeah.

**Heather** 1:35:20

I looked it up for you Dr. Seuss tends to write an infographic to Tramadol or sometimes anapestic so we actually, at the beginning of the q&a last week, had heard from our moderator that it was anapestic tetrameter. Which is do it again? 12312. I can't do it now. 123412341234. I don't know what amprobe rasik or it could be and for bracket, but it looks like amphipathic means but tell us in the chat, and maybe I'll say it and will tell us yeah, or I'll look that's awesome.

**Bret** 1:35:56

I feel lame for having thought for even a moment that it might be I am big pentameter and

**Heather** 1:36:03

212121212. Yeah, yeah, I am back being one, two, and then pentameter, five. Right, there it is. There it is. The on the importance of natural, dark and quiet. These places exist closer by sea, Eastern Oregon, john de country. Absolutely. lived here for six years headed to Alaska. In two weeks, we'll miss the clear skies and silence of a fellow wildlife biologist in her 50s. Love the streams. Thanks. Thank you. You're headed to Alaska where you're going to miss the clear skies and silence. You must be going to Anchorage or some other place. It seems like Alaska should have a lot of natural dark, quiet. Yeah, a lot of dark and all at once. All at once. Yeah.

**Bret** 1:36:51

Good luck. Enjoy Alaska. Bring socks. What I've heard

**Heather** 1:36:59

considering your discussion on the benefits of appreciating nature to the two of you meditate, good day from Australia. No, not not in so much. We don't call it that I did. I've mentioned here before, I was lucky enough to spend two weeks when I was at the end of high school on a Buddhist artists retreat with tech, not Han and a number of beat poets from the 60s. And I was like the representative teenager, who had been invited by my creative writing teacher who was himself a beat poet. And for those two weeks, we did tech not Han led us in three sitting and one walking meditation every day. But I didn't maintain I really didn't really divide. And I loved that time. I didn't develop the habit, nor have you ever done so. But I think we both find other ways of finding peace from our own thoughts, which I'm sure for those people who are active meditators, we'll find that description of what it does or what it is impossibly naive, but I think biking, board and kayaking like there's a number of activities that are active but solitary that provide that and maybe it is a kind of sometimes for me it is meditative. And maybe because I did learn about meditation from one of the greats and one of the kinds of meditation we were doing was a walking meditation. Maybe you might actually call it that and maybe part of why I'm so so resistant and why it's so anathema when you got me a fancy helmet, which would allow you to speak into my head while I was biking. Like I'm going to hurl this thing into the sea I have no interest in what I promised it could talk to itself then somewhere else

**Bret** 1:38:53

well I'm not gonna I'm not going to relitigate that one but I will say with respect to to meditation I I'm actually in the running for World worst meditator. Yes, I am. Really not good at this. I mean, sometimes I can do it but not for long periods but six seven seconds in a row I can I can really get into some stuff but yeah, I'm absolutely terrible at this and it drives me crazy. I harbored no belief that I could get good at it. You once got us a mental thing where we got to try sensory deprivation tank and early to sensory deprivation to what it's not really sensory deprivation. If you're in the same tank, yeah,

**Heather** 1:39:45

I would have driven me completely crazy. Because of what you reported we did. Completely adjacent tags and you came out of it going like I barely survive. It was like the longest hour

**Bret** 1:39:55

of my life. It was terrible. I do not

**Heather** 1:39:59

get About he said that, like, I never went back for another one. But I was like, Okay, I see it. I could see getting into it, but I'm certainly not gonna force the issue and you were like, it was it was torture. It's torture. It

**Bret** 1:40:13

was torture. But you know, yesterday, I sat very calmly and watched wildlife and listen to the brook and I had lots of thoughts. It was cool. And yeah.

**Heather** 1:40:31

The answer would appear to be no, yes. Certainly no for Brett. And maybe I could claim that some of my walks are walking meditations, but honestly, not really. Yeah. The dog is like, why are you still on? Yes. Oh, we got we got. We got our elders here. We got our 10 year old kitty and our eight year old dog to birthday tomorrow. Okay, how about let's do two more questions.

1:40:56

There are some people to join in.

**Heather** 1:41:01

Okay. You guys couldn't hear that, presumably. But Zach says he's gonna point out some big ticket questions down below that we'll get to many animals, for instance, cats play with their tail. Could this be part of the adaptive role of the tail? If not, is the relation completely circumstantial? What's the correct way to think about this? It's interesting. Good question. Yeah, I have a training like training and hunting like early play.

**Bret** 1:41:26

Yeah, but I don't I think the thing is, I've seen adults flick their tails in adult people. No. Interestingly, I can't say that they're not doing it. It's just it's very hard to tell. Yeah.

**Heather** 1:41:42

But I feel that I'm sure everyone is now wondering, that is an ape. synapomorphy at the loss of tail and a loss of the day. It's not just us. It's all the apps, all the apps. Yep, there they be apps. So be apps Ivan's Simon Yeah,

**Bret** 1:41:57

yes. So anyway, the flicking of the tail is a way a parent could cause a young kitten to become sensitized to certain kinds of motions and things like that. I

**Heather** 1:42:09

think that's actually the two examples that I can think of that I know, to our earlier point. Lion Cubs playing with a male's tail is when you know, he puts up with it for a little while. And then he's like, yep, off me.

**Bret** 1:42:23

Right, kid. But I would say look, tail is a complex phenomenon. And the right way to think of it is, does a bunch of things. Which of them has primacy, which of them drove the evolution of the thing, and then once it evolved, it started doing other things. And so we can ask this question, you know, for things like, why did music evolve? Yes, we can establish that it evolved that it is a an adaptation. And it does many things, right. It rallies people to a cause it brings them together, it synchronizes emotions, it does lots of things. But the question is what drove the evolution of the first thing that crosses the threshold into qualifying is music, what drove the evolution of tails to the first thing that we would call a tail? And how does that fit with all of the things you know, in cats, for example, we can say for sure that the tail conveys information about emotional state, it has a huge impact on the cat's ability to reorient in the air and land on its feet. I would guess if I had to guess one I would say that that parameter the ability to you know to shift the body by moving the tail in the opposite direction. So as primacy but

**Heather** 1:43:37

up apologies if I missed it, but you know, Tails or plesiomorphic, or I'm just using way too many technical terms here today, but tails are pleomorphic to mammals, meaning that tails are older than mammals that mammals came into being as mammals already having tails, right? So you know, they emerged from reptiles which had tails, and, frankly, probably the, you know, the first tetrapod had tails. So you got tail loss and a couple of clades like frogs and like EPS, but you know, tail is really old, really

**Bret** 1:44:06

old. And so Originally, it emerges as a swimming aid, right? etc. So you're, incidentally, I almost use pleasee Morphe to describe selection in the universe prior to there being a heredity. Which you're the only person that would have gotten what I was talking about, but I get it now. Yep, yep. But anyway, yeah,

**Heather** 1:44:27

you're right this moment.

**Bret** 1:44:29

Yeah, me too. This has been nice. The, your point is the correct one, which is in this case, we can't say what drove the evolution of tails in mammals because nothing drove the evolution of tails and mammals. Tails arrived as mammals were here. So and that's what

**Heather** 1:44:45

drives the modification of tails in Well, for instance, you know, cats using their tails to write themselves Yeah. Which is useful in cats in in concert with the fact that for instance, they have clavicles That are that float loose on their skeleton, their clavicles aren't connected to any other skeleton elements. They're just connected by soft tissue by ligaments and tendons are one of the two items. Remember distinction means that they have an ability to do these, you know, twisting acrobatics, whereas a dog would have less would be of less value there. Yeah. So I don't it. What exactly is the character that we're trying to explain about tails? It's not it's not tails. It's something particular to what, for instance, cats can do with tails. And, you know, this question says, for instance, cats, but it isn't specifically about cats, you know, so I don't know if, for instance, rodents in a burrow, haven't been born to a litter, play with tails play with their own tails or play with their siblings tails, or even once they're out and being to forage, if they are, or, you know, or is it just predator species? Or, you know, is it play at hunting? Yes, yeah. Hunting behavior.

**Bret** 1:45:59

Well, it's interesting. Surely somebody has done a review of tail use? Yeah, there's has to be it's molossia bats, I believe. freetail bats that use their tails to find crevices that they back into?

**Heather** 1:46:17

Really? Yeah. So they use it kind of like a prehensile

**Bret** 1:46:21

Well, the thing is, in no many I think it's fair to say most bats, the tail is embedded in the tail membrane or Batavia, free tailed bats have their tail just been who the Mawson's are, yeah, I've been have had their tails freed from that membrane, leaving them more like mouse tails

**Heather** 1:46:38

and digit. Oh, that's fascinating.

**Bret** 1:46:40

I sure hope that turns out to still be true. I remember that. You know, I never stated in the lawsuits, but I believe that that was the explanation.

**Heather** 1:46:49

That's really cool. No. Okay. Well, Zach, the next two questions both look like the next

1:46:54

one is a guy who sent three individual $100 questions each about Jimmy and MCs, you should read them together.

**Heather** 1:47:02

Well, but this one is the one I was looking at the does also Hi. Yep. And then there's a guy who's that $100 with no chat, which is okay, when I was born. I'll just I'll read a couple of these. And then you tell me if I missed any Okay. All right. Do you think that seasonal affective disorder is actually a disorder? Doesn't it make perfect sense to conserve energy in a dark, cold winter? It seems like the idea of constant workout put despite changes in our environment is the problem. Question mark. Good one. Yeah, that's really good.

**Bret** 1:47:29

I would say the quick and dirty version of this is that something seasonal that fits this pattern is almost undoubtedly adaptive a pattern in your motivation to go do versus stay still, probably it doesn't serve us

**Heather** 1:47:46

hold on. related to I don't know, a couple weeks ago, when I was talking about some of that moon, that that moon research, the finding that in environments absent electric lights, people will sometimes code can't remember how it went very, sometimes go to bed after the sun sets, but very rarely wake up before the sun rises. And given that that is the case, absent electric lights, you would expect people to the farther you are from the equator, the longer you would sleep in the winter apps and electric lights right, therefore constraining ourselves to a, you know, eight to five job and you know, a constant expectation about when you go to bed. And when you wake up, regardless of what's actually going on astronomically, is a Piper novel problem, right? And

**Bret** 1:48:39

then imagine that you project this into population is living near or above the Arctic Circle, then the point is, it grows incoherent very quickly. So what this says is there some ancestral adaptive pattern, that ancestral adaptive patterns probably irrelevant to people who can artificially light their environments and have effectively unlimited access to food, right? So we can be productive indoors during hours that we might, you know, if we had lived in primitive circumstances, had been better off sleeping and to preserve energy. So there's an incoherence between modernity and the adaptation problem, but then add on top of that, undoubtedly, populations differ in their adaptive response and equitorial population shouldn't have seasonal effect of anything, right? So given that and given that we're now mixing almost at random, the point is, well, how much of our predisposition to that adaptation is genetic? That's an open question. To the extent it's genetic, what happens if two people who come from different you know, latitudes, produce offspring, what program do they get is one of them dominant to the other? And then what do we do with the fact that your program probably doesn't match the place you are anyway, so it might it might just introduce chaos. And so yes, all of those things take the very simple fact of their likely Being an adaptation that is connected to this, and result in being a horror show in modern times with people who don't know about what they're messing with messing with this in such a profound way.

**Heather** 1:50:13

Excellent. Next question, Brett. I hope that you are part of the GMA and AMC movement. It's the hill to die on for all people. I enjoyed you on Joe Rogan, the Fed created a hedge against society when they repeatedly halted the stocks.

1:50:30

And this guy has two other questions, same dollar amount used to read them.

**Heather** 1:50:34

Okay, I'll read them. Us Now before you respond. Please give me 15 minutes on your thoughts on the GMA AMC saga, more money invested in two stocks and ever before we double down with the stock went down 90%. And now it physically or mathematically cannot go down the real deal revolution, please research, our slash GMA. And then I have $100,000 in gmv, and AMC, and on February 24 25th, I turned 10k into a million dollars about to do it way bigger this time. You can take $300 and buy a GMP. Though, I don't think that is I just made

1:51:16

currently it closest to 300 sweet just saying take about $300 and buy

**Heather** 1:51:19

ag me Okay,

**Bret** 1:51:20

well, this is cool, thank you, I would say we are not invested. That may be dumb, I am very much invested in this idea. And the fact that these markets have become about the markets are there to generate value that is supposed to be recovered as an enhancement on well being. That is to say, the, the mechanisms of the market. The mythology of them is about the production of value and the degree to which these markets are very much about something else most of the time. And what I have said is that really ultimately, the only way to profit in the market is either through superior insight about some sort of industry, if you can see where an industry is going before the other experts can see it, you can profit and then insider information of one kind or another. And so in effect, the hedge funds have been playing the insider information game. And doing so in a way that is legal, or quasi legal or who knows. And so to see a collaborative effort, a ground up collaborative effort, confront that pattern with a similar kind of power, and then to see how many apparently unfair tactics were unleashed on them. Because apparently, the idea is the license to bend the rules is extreme. If you come in through one door, and it's disallowed, if you come in through another was fascinating. So anyway, I don't know what more to say about it. I'm not an expert in it by any stretch of the imagination. But I am fascinated by the effectively the revelation of what our system is built of, by by smart people who weren't are not part of the institutional structure.

**Heather** 1:53:22

Yeah, I will say one more thing about it, which is that we're not invested in but our son and producers Zachary

1:53:30

is a little bit and three stocks at $60 each.

**Heather** 1:53:34

So Zach has three stocks at $60 Ah, Zack, you want to pull up the page that has your your T shirts on it. So Zack actually create a little bit of merchandise, bring that up, and I'm just gonna talk and you can tell me if I'm wrong while you're pulling it up. Zach, as I understand that, you say that and you did that you would invest any profits that you made in JME? And that you would I guess you'd have diamond hands sack Is that right? And

1:54:03

the idea is invest 100% of the profits from these shirts into GMA so obviously you're not revenue but profits after product costs, etc. Yeah, a bunch of designs here that people who know about the GMC The Jimmy movement specifically will understand and may be very unclear to people who who don't know about it. So many of these sentiments don't really mean anything unless you know or unless you've spent time in the subreddit specifically but so

**Heather** 1:54:32

your your mic right now is that people can hear you right now they can hear me you are okay. And Can people see the URL if they are interested in going so it's

1:54:40

use GMB to the moon dot shop. If you if you're interested in shirts and 100% of the profits do go into GMA

**Bret** 1:54:48

and somewhere I appreciate it. There are hedge fund guys selling shirts that say g me to the moon and back

**Heather** 1:54:59

Yep, They're they're definitely trying to bring that bring that ship home.

**Bret** 1:55:02

Yep. Yes, they are. Yeah.

**Heather** 1:55:05

Well, gosh, a lot, a lot more great questions here. And we'll get to a few of them at the beginning of next week, but we managed to go way long. And it is still beautiful out for a couple more hours. So I think we're probably going to sign off and try to try to get outside for a little bit of what's remaining of this beautiful day in the Pacific Northwest. We thank you, as always, for you for being here for being interested in what we have to say. I encourage you to join us at either of our patrons. Please subscribe to the channel if you're not and perhaps Eclipse channel as well. Like this video. If you liked it, don't lie.

**Bret** 1:55:46

And go ahead and

**Heather** 1:55:48

if you're still here now. Oh yeah, that's a lot of hate watching if you didn't like it.

**Bret** 1:55:54

Do not underrate some of our dedicated detractors

**Heather** 1:56:01

to reading them. But yeah, we'll be here again next week. See you then.

**Bret** 1:56:06

And I think I'm going to, I'm going to go meditate. And I'm done.

**Heather** 1:56:13

Get outside everyone. Well